



Kenneth M. Rubin
Senior Counsel
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, FL 33408-0420
(561) 691-2512
(561) 691-7135 (Facsimile)
Ken.Rubin@fpl.com

April 1, 2019

-VIA ELECTRONIC FILING -

Mr. Adam Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

**Re: Petition for Approval of 2019 Revisions to Florida Power & Light Company's
Underground Residential and Commercial Differential Tariffs**

Dear Mr. Teitzman:

Enclosed please find Florida Power and Light Company's ("FPL") Petition for Approval of 2019 Revisions to FPL's Underground Residential and Commercial Differential Tariffs.

Please contact me should you or your Staff have any questions or concerns regarding this filing at (561) 691-2512.

Sincerely,

/s/Kenneth M. Rubin
Kenneth M. Rubin

Enclosure

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Approval of Underground Residential) Docket No.
and Commercial Differential Tariff Revisions)
_____) Filed: April 1, 2019

**PETITION FOR APPROVAL OF 2019 REVISIONS TO
FLORIDA POWER & LIGHT COMPANY’S UNDERGROUND
RESIDENTIAL AND COMMERCIAL DIFFERENTIAL TARIFFS**

Florida Power & Light Company (“FPL”), by and through its undersigned counsel, and pursuant to Rules 25-6.033 and 25-6.078(3), Florida Administrative Code (“F.A.C.”), hereby requests approval of FPL’s revisions to its Underground Residential Differential (“URD”) tariff sheets, as set forth below. In addition, FPL requests approval of FPL’s revisions to its Underground Commercial/Industrial Differential (“UCD”) tariff sheets as set forth below. In support of this Petition, FPL states as follows:

(1) All pleadings, correspondence, staff recommendations, orders, or other documents filed, served or issued in this docket should be served on the following individuals on behalf of FPL:

Kenneth M. Rubin
Senior Counsel
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408-0420
Telephone: (561) 691-2512
Facsimile: (561) 691-7135 (facsimile)
Ken.rubin@fpl.com

Kenneth Hoffman
Vice President, Regulatory Affairs
Florida Power & Light Company
134 West Jefferson Street
Tallahassee, Florida 32301-1713
Telephone: (850) 521-3919
Facsimile: (850) 521-3939
Kenneth.hoffman@fpl.com

(2) Rule 25-6.078(3), F.A.C., requires each utility to file with the Commission, on or before October 15 of each year, Division of Economic Regulation Form PSC/ECR 13-E, Schedule 1. If the cost differential for underground service as calculated in Schedule 1 varies from the Commission-approved differential by plus or minus 10% or more, the utility must file a written policy and supporting data and analyses as prescribed in Sections (1), (4), and (5) of Rule 25-6.078 on or before April 1 of the following year. Additionally, Rule 25-6.078(3), F.A.C., requires each utility to file a written policy and supporting data and analyses at least once every three years regardless of whether the 10% threshold is met.

(3) Because the 10% threshold was not met or exceeded since FPL's last URD tariff filing (Docket No. 160071-ED), as shown on FPL's Form PSC/ECR 13-E, Schedule 1 filings in October 2016, 2017 and 2018, FPL was not required by the Rule to file revised URD tariff sheets in 2017 or 2018.

(4) However, because it has been three years since FPL last updated its URD tariff sheets, FPL is filing this Petition as required by Rule 25-6.078(3), F.A.C., along with updated tariff sheets and written policy and analyses, as prescribed by Rule 25-6.078(1), (4) and (5), F.A.C.

(5) Although not required by the Commission, FPL is also following its customary practice of filing revised UCD tariffs and supporting data, analyses and cost justification to accompany revisions to its URD tariffs.

FPL's URD Tariffs

(6) FPL's revised URD tariffs are contained in Appendix URD 1 to this Petition. Appendix URD 1 includes the following revised Tariff sheets amending the

charges found in Section 6 of FPL's Tariff Book, General Rules and Regulations for Electric Service, in final and legislative formats:

6,095 6.120
6.100 6.125
6.110 6.130
6.115

(7) The revisions to the charges found in the above-specified URD tariff sheets are shown in Appendix URD 1, in final and legislative formats. Appendix URD 2 sets forth FPL's narrative support for the changes to its rules and regulations and standard forms in FPL's Tariff Book as described above. Appendices URD 3 and 4 detail and support FPL's changes in its Estimated Average Cost Differential, which support the changes in FPL's tariffs identified above.

(8) The information set forth in Appendices URD 1, 2, 3 and 4, filed herewith and incorporated herein by reference, provide the information required under Rule 25-6.078, F.A.C., and the necessary support for the relief requested in this Petition.

FPL's UCD Tariffs

(9) FPL's revised UCD tariffs are contained in Appendix UCD 1 to this Petition. Appendix UCD 1 includes the following revised UCD tariff sheets, in final and legislative formats, amending the charges found in Section 6 of FPL's Tariff Book, General Rules and Regulations for Electric Service:

6.520
6.530
6.540

Appendix UCD 2 sets forth FPL's revisions (additions/deletions) and the reasons for the changes to FPL's UCD tariff sheets. The data and analyses supporting the changes in the UCD tariffs are set forth in Appendices UCD 3 and 4.

(10) Unlike the URD tariffs, FPL's UCD tariffs are not governed by Rule 25-6.078, F.A.C., or any other rule which specifies that the UCD tariffs must reflect the impact of the Storm Hardening rule or the operational cost differential (including storm costs). Nonetheless, FPL has incorporated the cost effects of hardening its overhead system into the calculation of its UCD charges. FPL has concluded, however, that it is not only not required but it is not feasible to apply to the UCD tariffs the operational cost differential that FPL developed for the URD tariffs. The UCD tariff charges are generally tailored to specific equipment and materials that are utilized to provide underground service to a single or limited number of commercial buildings in distinct and widely varying circumstances, unlike the URD tariff which is designed to apply to an entire residential subdivision. FPL's cost accounting systems and processes are not specific enough to discern operational cost differential for these granular, "one off" types of construction activities. Because of these implementation obstacles and because there is no Commission requirement to do so, FPL has not reflected adjustments for the effects of operational costs in the calculation of its UCD tariffs.

(11) The information set forth in Appendices UCD 1, 2, 3 and 4, filed herewith and incorporated by reference, provides the information necessary to support the revisions to FPL's UCD as requested in this Petition.

(12) FPL requests the effective date for implementation of the revised URD and UCD tariffs presented with this Petition be thirty (30) days after the date of the Commission's vote approving the appended revised tariff sheets.

WHEREFORE, FPL requests the Commission to approve the revised tariff sheets filed in Appendices URD 1 and UCD 1, effective thirty (30) days after the date of the Commission vote approving said revised tariff sheets.

Respectfully submitted,

Kenneth M. Rubin
Senior Counsel
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, FL 33408
Telephone: (561) 691-2512
Facsimile: (561) 691-7135

By: /s/ Kenneth M. Rubin
Kenneth M. Rubin
Fla. Bar No. 349038

APPENDIX 1
URD

**LEGISLATIVE TARIFF
URD**

(Continued from Sheet No. 6.090)

10.2.8.1 Credit for TUGs

If the Applicant installs the permanent electric service entrance such that FPL's service lateral can be subsequently installed and utilized to provide that building's construction service, the Applicant shall receive a credit in the amount of ~~\$60.00~~70.12 per service lateral, subject to the following requirements:

- a) TUGs must be inspected and approved by the local inspecting authority.
- b) All service laterals within the subdivision must be installed as TUGs.
- c) FPL must be able to install the service lateral, energize the service lateral, and set the meter to energize the load side of the meter can, all in a single trip. Subsequent visits other than routine maintenance or meter readings will void the credit.
- d) Thereafter, acceptance and receipt of service by the Customer shall constitute certification that the Customer has met all inspection requirements, complied with all applicable codes and rules and, subject to section 2.7 Indemnity to Company, or section 2.71 Indemnity to Company – Governmental, FPL's General Rules and Regulations, the Customer releases, holds harmless and agrees to indemnify the Company from and against loss or liability in connection with the provision of electrical services to or through such Customer-owned electrical installations.
- e) The Applicant shall be held responsible for all electric service used until the account is established in the succeeding occupant's name.

This credit applies only when FPL installs the service - it does not apply when the applicant installs the service conduits, or the service conduits and cable.

10.2.9. Location of Distribution Facilities

Underground distribution facilities will be located, as determined by the Company, to maximize their accessibility for maintenance and operation. The Applicant shall provide accessible locations for meters when the design of a dwelling unit or its appurtenances limits perpetual accessibility for reading, testing, or making necessary repairs and adjustments.

10.2.10. Special Conditions

The costs quoted in these rules are based on conditions which permit employment of rapid construction techniques. The Applicant shall be responsible for necessary additional hand digging expenses other than what is normally provided by the Company. The Applicant is responsible for clearing, compacting, boulder and large rock removal, stump removal, paving, and addressing other special conditions. Should paving, grass, landscaping or sprinkler systems be installed prior to the construction of the underground distribution facilities, the Applicant shall pay the added costs of trenching and backfilling and be responsible for restoration of property damaged to accommodate the installation of underground facilities.

10.2.11. Point of Delivery

The point of delivery shall be determined by the Company and will normally be at or near the part of the building nearest the point at which the secondary electric supply is available to the property. When a location for a point of delivery different from that designated by the Company is requested by the Applicant, and approved by the Company, the Applicant shall pay the estimated full cost of service lateral length, including labor and materials, required in excess of that which would have been needed to reach the Company's designated point of service. The additional cost per trench foot is ~~\$7.20~~7.91. Where an existing trench is utilized, the additional cost per trench foot is ~~\$2.78~~3.00. Where the Applicant provides the trenching, installs Company provided conduit according to Company specifications and backfilling, the cost per additional trench foot is ~~\$2.02~~2.16. Any re-designation requested by the Applicant shall conform to good safety and construction practices as determined by the Company. Service laterals shall be installed, where possible, in a direct line to the point of delivery.

(Continued on Sheet No. 6.096)

SECTION 10.3 UNDERGROUND DISTRIBUTION FACILITIES FOR
 RESIDENTIAL SUBDIVISIONS AND DEVELOPMENTS

10.3.1. Availability

When requested by the Applicant, the Company will provide underground electric distribution facilities, other than for multiple occupancy buildings, in accordance with its standard practices in:

- a) Recognized new residential subdivision of five or more building lots.
- b) Tracts of land upon which five or more separate dwelling units are to be located.

For residential buildings containing five or more dwelling units, see SECTION 10.6 of these Rules.

10.3.2. Contribution by Applicant

a) The Applicant shall pay the Company the average differential cost for single phase residential underground distribution service based on the number of service laterals required or the number of dwelling units, as follows:

	<u>Applicant's Contribution</u>
1. Where density is 6.0 or more dwelling units per acre:	
1.1 Buildings that do not exceed four units, townhouses, and mobile homes – per service lateral.	
1. Subdivisions with 300 or more total service laterals	\$ 0.00
2. Subdivisions from 100 to 299 total service laterals	\$ 0.00
3. Subdivisions less than 100 total service laterals	\$ <u>57,970.00</u>
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route - per dwelling unit.	
1. Subdivisions with 300 or more total dwelling units	\$ 0.00
2. Subdivisions from 100 to 299 total dwelling units	\$ 0.00
3. Subdivisions less than 100 total dwelling units	\$ 0.00
2. Where density is 0.5 or greater, but less than 6.0 dwelling units per acre:	
Buildings that do not exceed four units, townhouses, and mobile homes – per service lateral	
1. Subdivisions with 200 or more total service laterals	\$ 0.00
2. Subdivisions from 85 to 199 total service laterals	\$ <u>182,350.00</u>
3. Subdivisions less than 85 total service laterals	\$ <u>266,350.00</u>
3. Where the density is less than 0.5 dwelling units per acre, or the Distribution System is of non-standard design, individual cost estimates will be used to determine the differential cost as specified in Paragraph 10.2.5.	

Additional charges specified in Paragraphs 10.2.10 and 10.2.11 may also apply.

b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains, as follows:

	<u>Applicant's Contribution</u>
Cost per foot of feeder trench within the subdivision (excluding switches)	\$9,0210.09
Cost per <u>above ground padmounted</u> switch package	\$27,200.13 \$25,716.84

(Continued on Sheet No. 6.110)

(Continued from Sheet No. 6.100)

- c) Where primary laterals are needed to cross open areas such as golf courses, parks, other recreation areas and water retention areas, the Applicant shall pay the average differential costs for these facilities as follows:

Cost per foot of primary lateral trench within the subdivision

1) Single Phase - per foot	\$0.71 <u>0.98</u>
2) Two Phase - per foot	\$2.72 <u>3.02</u>
3) Three Phase - per foot	\$4.38 <u>4.70</u>

- d) For requests for service where underground facilities to the lot line are existing and a differential charge was previously paid for these facilities, the cost to install an underground service lateral to the meter is as follows:

Density less than 6.0 dwelling units per acre:	\$348.83 <u>398.76</u>
Density 6.0 or greater dwelling units per acre:	\$258.34 <u>295.96</u>

10.3.3. Contribution Adjustments

- a) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant provides all trenching and backfilling for the Company's distribution system, excluding feeder.

	Credit to Applicant's Contribution	
	Backbone	Service
1. Where density is 6.0 or more dwelling units per acre:		
1.1 Buildings that do not exceed four units, townhouses, and mobile homes - per service lateral.	\$149.16 <u>174.32</u>	\$156.59 <u>183.00</u>
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route - per dwelling unit.	\$123.35 <u>144.16</u>	N/A
2. Where density is 0.5 or greater, but less than 6.0 dwelling units per acre:		
Buildings that do not exceed four units, townhouses, and mobile homes - per service lateral	\$247.06 <u>288.73</u>	\$219.22 <u>256.20</u>

- b) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant installs all Company-provided conduit excluding feeder per FPL instructions. This credit is:

	Credit to Applicant's Contribution	
	Backbone	Service
1. Where density is 6.0 or more dwelling units per acre:		
1.1 Buildings that do not exceed four units, townhouses, and mobile homes - per service lateral.	\$62.07 <u>72.54</u>	\$48.00 <u>56.09</u>

(Continued on Sheet No. 6.115)

(Continued from Sheet No. 6.110)

	Credit to Applicant's Contribution	
	Backbone	Service
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route - per dwelling unit.	\$50.61 <u>59.15</u>	N/A
2. Where density is .5 or greater, but less than 6.0 dwelling units per acre, per service lateral. \$58.80 <u>68.71</u>	\$99.47 <u>116.25</u>	
c) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant provides a portion of trenching and backfilling for the Company's facilities, per foot of trench - \$3.48 <u>4.07</u> .		
d) Credits will be allowed to the Applicant's contribution in section 10.3.2. where, by mutual agreement, the Applicant installs a portion of Company-provided PVC conduit, per FPL instructions (per foot of conduit): 2" PVC - \$0.60 <u>0.70</u> ; larger than 2" PVC - \$0.84 <u>0.98</u> .		
e) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided feeder splice box, per FPL instructions, per box - \$664.74 <u>776.87</u> .		
f) Credit will be allowed to the Applicant's contribution in section 10.3.2., where by mutual agreement, the Applicant installs an FPL-provided primary splice box, per FPL instructions, per box - \$232.78 <u>272.05</u> .		
g) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided secondary handhole, per FPL instructions, per handhole: 17" handhole - \$21.60 <u>25.24</u> ; 24" or 30" handhole - \$61.19 <u>71.52</u> .		
h) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided concrete pad for a pad-mounted transformer or capacitor bank, per FPL instructions, per pad - \$60.00 <u>70.12</u> .		
i) Credit will be allowed to the Applicant's contribution in Section 10.3.2., where, by mutual agreement, the Applicant installs a portion of Company-provided flexible HDPE conduit, per FPL instructions (per foot of conduit): \$0.12 <u>0.14</u> .		
j) Credit will be allowed to the Applicant's contribution in Section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided concrete pad and cable chamber for a pad-mounted feeder switch, per pad and cable chamber - \$565.15 <u>660.48</u> .		

**SECTION 10.4 UNDERGROUND SERVICE LATERALS FROM
 OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS**

10.4.1. New Underground Service Laterals

When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five separate dwelling units.

10.4.2. Contribution by Applicant

a) The Applicant shall pay the Company the following differential cost between an overhead service and an underground service lateral, as follows:

	<u>Applicant's Contribution</u>
1. For any density:	
Buildings that do not exceed four units, townhouses, and mobile homes	
a) per service lateral (includes service riser installation)	\$683,847.56.40
b) per service lateral (from existing handhole or PM TX)	\$348,833.98.76
2. For any density, the Company will provide a riser to a handhole at the base of a pole	\$705,467.67.83

Additional charges specified in Paragraphs 10.2.10 and 10.2.11 may also apply. Underground service or secondary extensions beyond the boundaries of the property being served will be subject to additional differential costs as determined by individual cost estimates.

10.4.3. Contribution Adjustments

a) Credit will be allowed to the Applicant's contribution in Section 10.4.2 where, by mutual agreement, the Applicant provides trenching and backfilling for the Company's facilities. This credit is:

	<u>Credit To Applicant's Contribution</u>
1. For any density:	
Buildings that do not exceed four units, townhouses, and mobile homes	
- per foot	\$3.48 \$4.07

(Continued on Sheet No. 6.125)

(Continued from Sheet No. 6.120)

- b) Credit will be allowed to the Applicant's contribution in Section 10.4.2, where by mutual agreement, the Applicant installs Company-provided conduit, per FPL instructions, as follows:

1. For any density:

Buildings that do not exceed four units,
 townhouses, and mobile homes

- per foot:	2" PVC	\$0.600.70
	Larger than 2" PVC	\$0.840.98

- c) Credit will be allowed to the Applicant's contribution in Section 10.4.2, where by mutual agreement, the Applicant requests the underground service to be installed as a TUG (subject to the conditions specified in Section 10.2.8.1), per service lateral, as follows:

1. For any density:

Buildings that do not exceed four units,
 townhouses, and mobile homes

-per service lateral:		\$60.00 <u>70.12</u>
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**SECTION 10.5 UNDERGROUND SERVICE LATERALS REPLACING
 EXISTING RESIDENTIAL OVERHEAD AND UNDERGROUND SERVICES**

10.5.1. Applicability

When requested by the Applicant, the Company will install underground service laterals from existing systems as replacements for existing overhead and underground services to existing residential buildings containing less than five individual dwelling units.

10.5.2. Rearrangement of Service Entrance

The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

10.5.3 Trenching and Conduit Installation

The Applicant shall also provide, at no cost to the Company, a suitable trench, perform the backfilling and any landscape, pavement or other similar repairs and install Company provided conduit according to Company specifications. When requested by the Applicant and approved by the Company, the Company may supply the trench and conduit and the Applicant shall pay for this work based on a specific cost estimate. Should paving, grass, landscaping or sprinkler systems need repair or replacement during construction, the Applicant shall be responsible for restoring the paving, grass, landscaping or sprinkler systems to the original condition.

10.5.4. Contribution by Applicant

a)	The charge per service lateral replacing an existing Company-owned overhead service for any density shall be:	<u>Applicant's Contribution</u>
1.	Where the Company provides an underground service lateral:	\$651.49 <u>704.99</u>
2.	Where the Company provides a riser to a handhole at the base of the pole:	\$930.43 <u>1016.79</u>
b)	The charge per service lateral replacing an existing Company-owned underground service at Applicant's request for any density shall be:	
1.	Where the service is from an overhead system:	\$643.46 <u>705.62</u>
2.	Where the service is from an underground system:	\$555.22 <u>605.99</u>
c)	The charge per service lateral replacing an existing Customer-owned underground service from an overhead system for any density shall be:	\$426.82 <u>456.03</u>
d)	The charge per service lateral replacing an existing Customer-owned underground service from an underground system for any density shall be:	\$91.81 <u>98.38</u>

The above charges include conversion of the service lateral from the last FPL pole to the meter location. Removal of any other facilities such as poles, downguys, spans of secondary, etc. will be charged based on specific cost estimates for the requested additional work.

**FINAL TARIFF
URD**

(Continued from Sheet No. 6.090)

10.2.8.1 Credit for TUGs

If the Applicant installs the permanent electric service entrance such that FPL's service lateral can be subsequently installed and utilized to provide that building's construction service, the Applicant shall receive a credit in the amount of \$70.12 per service lateral, subject to the following requirements:

- a) TUGs must be inspected and approved by the local inspecting authority.
- b) All service laterals within the subdivision must be installed as TUGs.
- c) FPL must be able to install the service lateral, energize the service lateral, and set the meter to energize the load side of the meter can, all in a single trip. Subsequent visits other than routine maintenance or meter readings will void the credit.
- d) Thereafter, acceptance and receipt of service by the Customer shall constitute certification that the Customer has met all inspection requirements, complied with all applicable codes and rules and, subject to section 2.7 Indemnity to Company, or section 2.71 Indemnity to Company – Governmental, FPL's General Rules and Regulations, the Customer releases, holds harmless and agrees to indemnify the Company from and against loss or liability in connection with the provision of electrical services to or through such Customer-owned electrical installations.
- e) The Applicant shall be held responsible for all electric service used until the account is established in the succeeding occupant's name.

This credit applies only when FPL installs the service - it does not apply when the applicant installs the service conduits, or the service conduits and cable.

10.2.9. Location of Distribution Facilities

Underground distribution facilities will be located, as determined by the Company, to maximize their accessibility for maintenance and operation. The Applicant shall provide accessible locations for meters when the design of a dwelling unit or its appurtenances limits perpetual accessibility for reading, testing, or making necessary repairs and adjustments.

10.2.10. Special Conditions

The costs quoted in these rules are based on conditions which permit employment of rapid construction techniques. The Applicant shall be responsible for necessary additional hand digging expenses other than what is normally provided by the Company. The Applicant is responsible for clearing, compacting, boulder and large rock removal, stump removal, paving, and addressing other special conditions. Should paving, grass, landscaping or sprinkler systems be installed prior to the construction of the underground distribution facilities, the Applicant shall pay the added costs of trenching and backfilling and be responsible for restoration of property damaged to accommodate the installation of underground facilities.

10.2.11. Point of Delivery

The point of delivery shall be determined by the Company and will normally be at or near the part of the building nearest the point at which the secondary electric supply is available to the property. When a location for a point of delivery different from that designated by the Company is requested by the Applicant, and approved by the Company, the Applicant shall pay the estimated full cost of service lateral length, including labor and materials, required in excess of that which would have been needed to reach the Company's designated point of service. The additional cost per trench foot is \$7.91. Where an existing trench is utilized, the additional cost per trench foot is \$3.00. Where the Applicant provides the trenching, installs Company provided conduit according to Company specifications and backfilling, the cost per additional trench foot is \$2.16. Any re-designation requested by the Applicant shall conform to good safety and construction practices as determined by the Company. Service laterals shall be installed, where possible, in a direct line to the point of delivery.

(Continued on Sheet No. 6.096)

**SECTION 10.3 UNDERGROUND DISTRIBUTION FACILITIES FOR
 RESIDENTIAL SUBDIVISIONS AND DEVELOPMENTS**

10.3.1. Availability

When requested by the Applicant, the Company will provide underground electric distribution facilities, other than for multiple occupancy buildings, in accordance with its standard practices in:

- a) Recognized new residential subdivision of five or more building lots.
- b) Tracts of land upon which five or more separate dwelling units are to be located.

For residential buildings containing five or more dwelling units, see SECTION 10.6 of these Rules.

10.3.2. Contribution by Applicant

a) The Applicant shall pay the Company the average differential cost for single phase residential underground distribution service based on the number of service laterals required or the number of dwelling units, as follows:

	<u>Applicant's Contribution</u>
1. Where density is 6.0 or more dwelling units per acre:	
1.1 Buildings that do not exceed four units, townhouses, and mobile homes – per service lateral.	
1. Subdivisions with 300 or more total service laterals	\$ 0.00
2. Subdivisions from 100 to 299 total service laterals	\$ 0.00
3. Subdivisions less than 100 total service laterals	\$ 0.00
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route - per dwelling unit.	
1. Subdivisions with 300 or more total dwelling units	\$ 0.00
2. Subdivisions from 100 to 299 total dwelling units	\$ 0.00
3. Subdivisions less than 100 total dwelling units	\$ 0.00
2. Where density is 0.5 or greater, but less than 6.0 dwelling units per acre:	
Buildings that do not exceed four units, townhouses, and mobile homes – per service lateral	
1. Subdivisions with 200 or more total service laterals	\$ 0.00
2. Subdivisions from 85 to 199 total service laterals	\$ 0.00
3. Subdivisions less than 85 total service laterals	\$ 0.00
3. Where the density is less than 0.5 dwelling units per acre, or the Distribution System is of non-standard design, individual cost estimates will be used to determine the differential cost as specified in Paragraph 10.2.5.	

Additional charges specified in Paragraphs 10.2.10 and 10.2.11 may also apply.

b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains, as follows:

	<u>Applicant's Contribution</u>
Cost per foot of feeder trench within the subdivision	
(excluding switches)	\$10.09
Cost per above ground padmounted switch package	\$25,716.84

(Continued on Sheet No. 6.110)

(Continued from Sheet No. 6.100)

- c) Where primary laterals are needed to cross open areas such as golf courses, parks, other recreation areas and water retention areas, the Applicant shall pay the average differential costs for these facilities as follows:

Cost per foot of primary lateral trench within the subdivision

1) Single Phase - per foot	\$0.98
2) Two Phase - per foot	\$3.02
3) Three Phase - per foot	\$4.70

- d) For requests for service where underground facilities to the lot line are existing and a differential charge was previously paid for these facilities, the cost to install an underground service lateral to the meter is as follows:

Density less than 6.0 dwelling units per acre:	\$398.76
Density 6.0 or greater dwelling units per acre:	\$295.96

10.3.3. Contribution Adjustments

- a) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant provides all trenching and backfilling for the Company's distribution system, excluding feeder.

	Credit to Applicant's Contribution	
	Backbone	Service
1. Where density is 6.0 or more dwelling units per acre:		
1.1 Buildings that do not exceed four units, townhouses, and mobile homes		
- per service lateral.	\$174.32	\$183.00
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route		
- per dwelling unit.	\$144.16	N/A
2. Where density is 0.5 or greater, but less than 6.0 dwelling units per acre:		
Buildings that do not exceed four units, townhouses, and mobile homes		
- per service lateral	\$288.73	\$256.20

- b) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant installs all Company-provided conduit excluding feeder per FPL instructions. This credit is:

	Credit to Applicant's Contribution	
	Backbone	Service
1. Where density is 6.0 or more dwelling units per acre:		
1.1 Buildings that do not exceed four units, townhouses, and mobile homes		
- per service lateral.	\$72.54	\$56.09

(Continued on Sheet No. 6.115)

(Continued from Sheet No. 6.110)

	Credit to Applicant's Contribution	
	Backbone	Service
1.2 Mobile homes having Customer-owned services from meter center installed adjacent to the FPL primary trench route - per dwelling unit.	\$59.15	N/A
2. Where density is .5 or greater, but less than 6.0 dwelling units per acre, per service lateral.	\$116.25	\$68.71
c) Credits will be allowed to the Applicant's contribution in Section 10.3.2. where, by mutual agreement, the Applicant provides a portion of trenching and backfilling for the Company's facilities, per foot of trench – \$4.07.		
d) Credits will be allowed to the Applicant's contribution in section 10.3.2. where, by mutual agreement, the Applicant installs a portion of Company-provided PVC conduit, per FPL instructions (per foot of conduit): 2" PVC - \$0.70; larger than 2" PVC - \$0.98.		
e) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided feeder splice box, per FPL instructions, per box - \$776.87.		
f) Credit will be allowed to the Applicant's contribution in section 10.3.2., where by mutual agreement, the Applicant installs an FPL-provided primary splice box, per FPL instructions, per box - \$272.05.		
g) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided secondary handhole, per FPL instructions, per handhole: 17" handhole - \$25.24; 24" or 30" handhole - \$71.52.		
h) Credit will be allowed to the Applicant's contribution in section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided concrete pad for a pad-mounted transformer or capacitor bank, per FPL instructions, per pad - \$70.12.		
i) Credit will be allowed to the Applicant's contribution in Section 10.3.2., where, by mutual agreement, the Applicant installs a portion of Company-provided flexible HDPE conduit, per FPL instructions (per foot of conduit): \$0.14.		
j) Credit will be allowed to the Applicant's contribution in Section 10.3.2., where, by mutual agreement, the Applicant installs an FPL-provided concrete pad and cable chamber for a pad-mounted feeder switch, per pad and cable chamber - \$660.48.		

**SECTION 10.4 UNDERGROUND SERVICE LATERALS FROM
 OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS**

10.4.1. New Underground Service Laterals

When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five separate dwelling units.

10.4.2. Contribution by Applicant

a) The Applicant shall pay the Company the following differential cost between an overhead service and an underground service lateral, as follows:

	<u>Applicant's Contribution</u>
1. For any density:	
Buildings that do not exceed four units, townhouses, and mobile homes	
a) per service lateral (includes service riser installation)	\$756.40
b) per service lateral (from existing handhole or PM TX)	\$398.76
2. For any density, the Company will provide a riser to a handhole at the base of a pole	\$767.83

Additional charges specified in Paragraphs 10.2.10 and 10.2.11 may also apply. Underground service or secondary extensions beyond the boundaries of the property being served will be subject to additional differential costs as determined by individual cost estimates.

10.4.3. Contribution Adjustments

a) Credit will be allowed to the Applicant's contribution in Section 10.4.2 where, by mutual agreement, the Applicant provides trenching and backfilling for the Company's facilities. This credit is:

	<u>Credit To Applicant's Contribution</u>
1. For any density:	
Buildings that do not exceed four units, townhouses, and mobile homes - per foot	\$4.07

(Continued on Sheet No. 6.125)

**SECTION 10.5 UNDERGROUND SERVICE LATERALS REPLACING
 EXISTING RESIDENTIAL OVERHEAD AND UNDERGROUND SERVICES**

10.5.1. Applicability

When requested by the Applicant, the Company will install underground service laterals from existing systems as replacements for existing overhead and underground services to existing residential buildings containing less than five individual dwelling units.

10.5.2. Rearrangement of Service Entrance

The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

10.5.3 Trenching and Conduit Installation

The Applicant shall also provide, at no cost to the Company, a suitable trench, perform the backfilling and any landscape, pavement or other similar repairs and install Company provided conduit according to Company specifications. When requested by the Applicant and approved by the Company, the Company may supply the trench and conduit and the Applicant shall pay for this work based on a specific cost estimate. Should paving, grass, landscaping or sprinkler systems need repair or replacement during construction, the Applicant shall be responsible for restoring the paving, grass, landscaping or sprinkler systems to the original condition.

10.5.4. Contribution by Applicant

a)	The charge per service lateral replacing an existing Company-owned overhead service for any density shall be:	<u>Applicant's Contribution</u>
1.	Where the Company provides an underground service lateral:	\$704.99
2.	Where the Company provides a riser to a handhole at the base of the pole:	\$1016.79
b)	The charge per service lateral replacing an existing Company-owned underground service at Applicant's request for any density shall be:	
1.	Where the service is from an overhead system:	\$705.62
2.	Where the service is from an underground system:	\$605.99
c)	The charge per service lateral replacing an existing Customer-owned underground service from an overhead system for any density shall be:	\$456.03
d)	The charge per service lateral replacing an existing Customer-owned underground service from an underground system for any density shall be:	\$98.38

The above charges include conversion of the service lateral from the last FPL pole to the meter location. Removal of any other facilities such as poles, downguys, spans of secondary, etc. will be charged based on specific cost estimates for the requested additional work.

APPENDIX 2
URD

APPENDIX NO. 2
FPL 2019
Explanation of Proposed Revisions

This Appendix summarizes proposed revisions to the Rules and Regulations included in Section 10 (and applicable forms) of FPL's General Rules and Regulations for Electric Service. The basis for FPL's proposed tariff charges for underground installations can be found in Appendix No. 3.

1) Revised sheet 6.100 to clarify that the cost per switch is for "above ground padmounted" switch cabinets.

APPENDIX 3
URD

APPENDIX NO. 3

FPL - 2019

BASIS FOR UNDERGROUND RESIDENTIAL
DISTRIBUTION DIFFERENTIAL

New Underground Subdivision with Overhead Feeder Mains.

The average differential costs for Underground Residential Distribution (URD) stated in the FPL Rules and Regulations were derived from cost estimates of underground facilities and their equivalent overhead designs. The high density subdivision used for these estimates was developed by the group of Florida Electric Utilities in response to Florida Public Service Commission Orders No. 6031 and 6031-B. The low density subdivision was also developed by the group of Florida Electric Utilities and was approved by Florida Public Service Commission Order No. PSC-96-0026-FOF-EI. They represent average conditions in Florida Subdivisions served by FPL. Densities range from 0.5 to 6.0 lots per acre for low density subdivisions. The low density subdivision contains 210 lots; the high density subdivision 176 lots. Subdivision plats are shown in Exhibits IV and XI. Differential cost estimates were made from engineering layouts of underground and overhead facilities. These included primary laterals, transformers, secondary lines and services, but not three phase feeders. These estimates employed standard Company design and estimating practices and the system-wide unit cost for labor and material which were in use at the end of 2018.

Design criteria included the following:

Design Customer Demand	7.25 KVA, including 2 1/2 tons of air conditioning for high density model and 9.35 KVA including 3 1/2 tons of air conditioning for low density model according to DERM. (1)
Primary Voltage	13200/7620 Volts
Underground Design	Rear/Front lot construction - All C-I-C (2)
Overhead Design	Front lot construction, extreme wind (145 MPH)

(1) FPL Distribution Engineering Reference Manual

(2) All cables are to be installed in PVC conduit.

The post-operational cost differentials for low density, high density, and meter pedestal reflect the net present value of operational costs, including average historical storm restoration, as contemplated by Rule 25-6.078(4), F.A.C. FPL has addressed operational cost differential as two separate components, covering non-storm and storm costs. For storm costs, FPL's starting point was the same data on storm restoration costs that it presented to the Commission in justifying the 25% GAF Waiver for eligible governmental underground conversion projects. One of the principal assumptions in calculating the storm restoration cost savings for GAF projects was that, because they covered large, contiguous areas, there would be no need for overhead restoration crews to go into the project neighborhoods and, hence, the savings would be maximized. However, because not all URD projects will involve a large, contiguous area like that of a GAF project, FPL has developed three tiers of storm cost differentials for the URD tariff. Tier 1 is for large "GAF-equivalent" projects, which would meet the GAF size and uniformity requirements.

The storm cost differential for Tier 1 projects reflects the same savings as were used to justify the GAF Waiver, expressed on a per lot basis. Tier 2 is for smaller projects (1-3 pole line miles) but otherwise meet the GAF eligibility criteria. Tier 2 projects receive 40% of the full GAF savings. Finally, Tier 3 is for small projects that do not necessarily meet any of the GAF eligibility criteria; for them the storm cost differential is 20% of the GAF savings.

FPL does not believe that there is a significant difference in the storm cost differentials for low-density versus high-density projects, so the Tier 1, 2 and 3 reductions apply regardless of the project density.

Estimates are broken down into a uniform format adopted as a standard by the participating companies (EX I - X).

Case 1. Low Density
Where density is 0.5 or greater, but less than 6 dwelling units per acre: Buildings that do not exceed four units, townhouses, and mobile homes -- per service lateral.

Case 2. High Density
Where density is 6.0 or more dwelling units per acre: Buildings that do not exceed four units, townhouses, and mobile homes -- per service lateral.

Case 3. Meter Pedestal
Where density is 6.0 or more dwelling units per acre: Mobile homes having Customer-owned services from meter centers installed adjacent to the FPL primary trench route -- per dwelling unit.

	<u>Operational Cost / Lot</u>				<u>Cost Differential</u>
	<u>Non-Storm</u>	<u>Storm</u>	<u>Total</u>		
<u>Low Density</u>					
Pre-Operational Cost					\$210.53
Post-Operational Cost					
Tier 1 (Full GAF) - 200 or more lots	(\$2,103)	(\$827)	(\$2,930)	Note 1	\$0.00
Tier 2 (40% GAF) - 85 to 199 lots	(\$2,103)	(\$331)	(\$2,434)	Note 1	\$0.00
Tier 3 (20% GAF) - less than 85 lots	(\$2,103)	(\$165)	(\$2,268)	Note 1	\$0.00

	<u>Operational Cost / Lot</u>				<u>Cost Differential</u>
	<u>Non-Storm</u>	<u>Storm</u>	<u>Total</u>		
<u>High Density</u>					
Pre-Operational Cost				Note 2	\$0.00
Post-Operational Cost					
Tier 1 (Full GAF) - 300 or more lots	(\$1,796)	(\$827)	(\$2,623)	Note 1	\$0.00
Tier 2 (40% GAF) - 100 to 299 lots	(\$1,796)	(\$331)	(\$2,127)	Note 1	\$0.00
Tier 3 (20% GAF) - less than 100 lots	(\$1,796)	(\$165)	(\$1,961)	Note 1	\$0.00

	<u>Operational Cost / Lot</u>				<u>Cost Differential</u>
	<u>Non-Storm</u>	<u>Storm</u>	<u>Total</u>		
<u>Meter Pedestal</u>					
Pre-Operational Cost				Note 2	\$0.00
Post-Operational Cost					
Tier 1 (Full GAF) - 300 or more lots	(\$1,796)	(\$827)	(\$2,623)	Note 1	\$0.00
Tier 2 (40% GAF) - 100 to 299 lots	(\$1,796)	(\$331)	(\$2,127)	Note 1	\$0.00
Tier 3 (20% GAF) - less than 100 lots	(\$1,796)	(\$165)	(\$1,961)	Note 1	\$0.00

Note 1: Where the "Post-Operational" Costs are negative, the differentials have been set to \$0.

Note 2: The "Pre-Operational Cost" differential has been set to \$0 since it is a negative amount.

10.4.2 UG Service Laterals from Overhead Lines.

Service lateral costs are included in the differential costs previously stated except in Case 3. The costs of service laterals were estimated separately to determine the differential cost between a standard overhead service and a similar length underground service from an overhead line. This differential cost was calculated by adding the differential service lateral cost to the pole-conduit terminal cost. The average pole-conduit terminal cost was found to be \$357.65 per service lateral.

Service lateral differential cost.....	\$398.75
Pole-conduit cost.....	<u>\$357.65</u>
Total cost.....	\$756.40
Service lateral differential cost fed from an existing UG source.....	<u>\$398.75</u>

A URD riser to a handhole at the base of the pole had a differential cost of \$767.83

10.5.4 Replacement of an Existing Service with an Underground Service.

Costs were also estimated for replacing existing services with underground service laterals. These costs were based on the applicant providing the trench because of the wide variations in the cost of excavating established, landscaped areas. Additional costs are associated with removal and premature retirement of existing services. Accordingly, adjustments were made to the cost of a new service lateral by adding the costs involved with the retirement of an existing service drop and subtracting trenching costs. The costs were estimated to be:

A. Cost per service lateral to replace Company-owned Overhead Service with:

	<u>Company UG Service</u>	<u>Riser to Handhole</u>
UG service lateral cost.....	\$756.40	\$0.00
Riser to handhole cost.....	\$0.00	\$767.83
Less trenching credit.....	(\$256.20)	\$0.00
Less conduit installation credit.....	(\$44.17)	\$0.00
Remaining value of existing service.....	\$181.99	\$181.99
Removal cost of existing service.....	\$66.97	\$66.97
Salvage.....	<u>\$0.00</u>	<u>\$0.00</u>
Total cost.....	\$704.99	\$1,016.79

B. Cost per service lateral to replace Company-owned Underground Service.

	<u>OH Source</u>	<u>UG Source</u>
UG service lateral cost.....	\$398.75	\$398.75
Handhole for connection to existing riser X .25.....	\$99.63	\$0.00
Less trenching credit.....	(\$256.20)	(\$256.20)
Less conduit credit.....	(\$44.17)	(\$44.17)
Remaining value of existing service.....	\$468.45	\$468.45
Removal cost of existing service.....	\$39.16	\$39.16
Salvage.....	<u>\$0.00</u>	<u>\$0.00</u>
Total Cost.....	\$705.62	\$605.99

C. Cost to replace Customer-owned Underground Service from an Overhead System.

UG service lateral cost.....	\$398.75
Pole-conduit cost.....	\$357.65
Less trenching credit.....	(\$256.20)
Less conduit installation credit.....	(\$44.17)
TOTAL.....	\$456.03

D. Cost to replace Customer-owned Underground Service from an Underground System.

UG service lateral cost.....	\$398.75
Less trenching credit.....	(\$256.20)
Less conduit installation credit.....	(\$44.17)
TOTAL.....	\$98.38

Underground Feeder/Lateral Cost.

Cost estimates were made for underground and overhead feeders and laterals necessary to serve residential communities in the model subdivisions. The average differential costs per foot were then determined. These results are shown in Exhibit XII.

Underground feeders/laterals were assumed to be installed in conduit with above grade switch cabinets. Overhead feeder costs included wood pole costs.

APPENDIX 4
URD

LOW DENSITY

COMPANY: FPL

DATE: 04/01/19

OVERHEAD VS. UNDERGROUND SUMMARY SHEET

Low Density 210 Lot Subdivision
Cost per Service Lateral

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$1,308.75	\$1,589.43	\$280.68
MATERIAL	\$1,039.11	\$968.96	(\$70.15)
TOTAL (1)	\$2,347.86	\$2,558.39	\$210.53

(1) Does not include storm or operational costs

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABOR

Low Density 210 Lot Subdivision

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$170.93	\$200.48	\$371.41
Primary	\$136.28	\$130.01	\$266.29
Secondary	\$41.14	\$119.51	\$160.65
Initial Tree Trim	-----	-----	-----
Poles	\$202.95	\$418.71	\$621.66
Transformers	\$262.25	\$215.59	\$477.84
Sub-Total	\$813.55	\$1,084.30	\$1,897.85
Stores Handling(3)	\$47.35	-----	\$47.35
SubTotal	\$860.90	\$1,084.30	\$1,945.20
Engineering(5)	\$178.21	\$224.45	\$402.66
TOTAL(6)	\$1,039.11	\$1,308.75	\$2,347.86

1 - Includes Sales Tax.

2 - Includes Meters.

3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs.

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABOR

Low Density 210 Lot Subdivision

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$206.96	\$384.14	\$591.10
Primary	\$238.21	\$212.67	\$450.88
Secondary	\$106.74	\$98.75	\$205.49
Transformers	\$206.72	\$76.35	\$283.07
Prim. & Sec. Trenching	-----	\$288.73	\$288.73
Service Trenching	-----	\$256.20	\$256.20
Sub-Total	\$758.63	\$1,316.84	\$2,075.47
Stores Handling(3)	\$44.15	-----	\$44.15
SubTotal	\$802.78	\$1,316.84	\$2,119.62
Engineering(5)	\$166.18	\$272.59	\$438.77
TOTAL(6)	\$968.96	\$1,589.43	\$2,558.39

1 - Includes Sales Tax.

2 - Includes Meters.

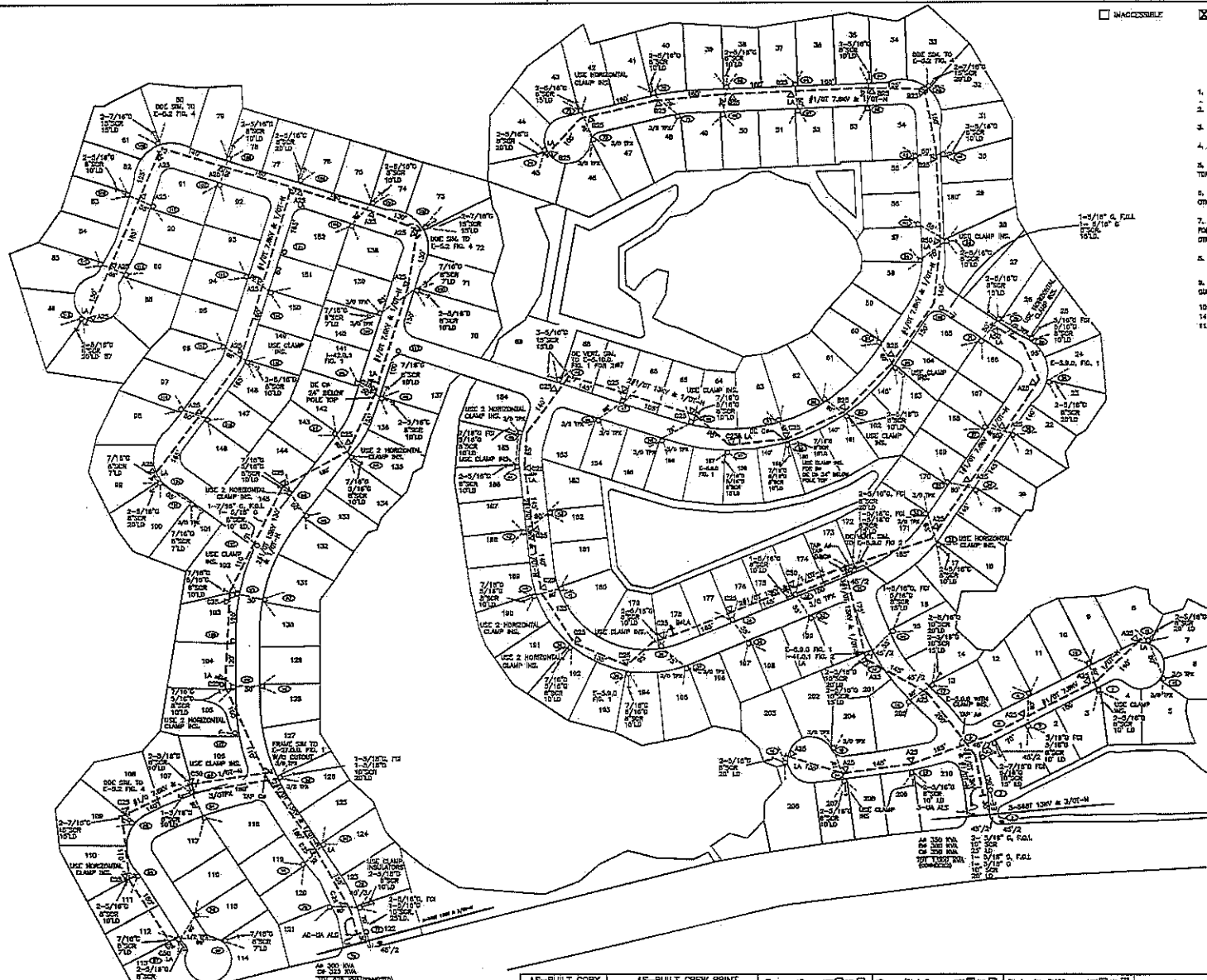
3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

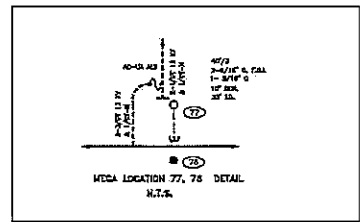
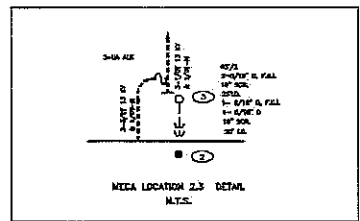
5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs.

UNACCESSIBLE 12KV FUTURE 23KV 23KV SALT SPRAY



1. ALL SERVICES ARE 1/0 TPE UNLESS OTHERWISE NOTED-4\"/>
- 2. ALL SECONDARY 3/0 TPE UNLESS OTHERWISE NOTED
- 3. ALL SERVICE POLES 35'/3
- 4. ALL LINE POLES 40'/3 UNLESS OTHERWISE NOTED.
- 5. FRAME ON PCL 35L TO E-51.0, PCL 1 UNLESS OTHERWISE NOTED.
- 6. FRAME ALL SET ON 16 PCL 35L TO I-11.0. FOR TANGERS AND I-11.0. PCL 3 FOR DC'S UNLESS OTHERWISE NOTED.
- 7. FRAME ALL SET ON 24 PCL 35L TO I-11.0. PCL 1 FOR TANGERS AND I-11.0. PCL 3 FOR DC'S UNLESS OTHERWISE NOTED
- 8. FRAME LOTS 2-3 AND 16-17 FOR E-51.0. (D-TAP CONSTRUCTION) QUANTUM MOUNT FUSE SWITCHES ON 1/2\"/>
- 10. EXCLUDED HAVE BEEN ORDERED TO 145 MPH CONTACT WEAR-TOE CAMERA
- 11. ALL PRIMARY CABLES DELIVERED FOR PCL 35L E-31.0.0.



10/27/2018 11:25:13 AM CAB NAME: Y20

AS-BUILT AUTH NO.	NOL	DATE	REVISION
N/A	2	2019	ADDED PCL TO ALL PRIMARY CABLES AND GRANGED SVC POLES FROM 35'/4 TO 35'/3
N/A	2	2016	ADDED ALS
677824	1	02/16/16	INSTALL POLES FOR 2017 TARIFF FILING
1556163	0	03/11/15	INSTALL ON WARES & POLES FOR TARIFF ENG

AS-BUILT COPY AS-BUILT CREW PRINT

Job CERTIFIED COMPLETED as shown on this AS-BUILT print. Material changes shown as R.O.S.

AS-BUILT CROWN PILES HAVE BEEN GIVEN & VERIFIED TO BE WITHIN TPL TOLERANCE. VALUES ARE SHOWN AT ALL LOCATIONS.

Estimated?	yes <input type="checkbox"/> no <input type="checkbox"/>	Survey/State?	yes <input type="checkbox"/> no <input type="checkbox"/>	Work with SHD?	yes <input type="checkbox"/> no <input type="checkbox"/>
Time Sheet?	yes <input type="checkbox"/> no <input type="checkbox"/>	Design/State?	yes <input type="checkbox"/> no <input type="checkbox"/>	OT/Special Mkt?	yes <input type="checkbox"/> no <input type="checkbox"/>
Map Postcard?	yes <input checked="" type="checkbox"/> no <input type="checkbox"/>	Trinch Feet	Bank Book East	3/10/18	
Posted by		CITY OR DIST	COUNTY AR	STATE RD	TAA
		RR 22ND	COUNTY RD	TRANSAL	
Telephone Request?	yes <input type="checkbox"/> no <input type="checkbox"/>	CITY Request?	yes <input type="checkbox"/> no <input type="checkbox"/>		



DESIGNED BY: M. BONNERANT
 DRAWN BY: T. COLLINS
 DATE: 03/13/18
 MAP NO.: ALL
 SCALE: 0 50 100 200 FEET

W/R: SP
 O.H. LAYOUT
 LOW DENSITY
 2018 URD TARIFF
 HARDENING REVISION
 DWG NO.: OHE2007
 REV: 677824 REV: 3544-42-883

2019 OH LOW DENSITY LAYOUT WITH 3.5 TON A/C

WR Number:
677824

2019
NUMBER OF LOTS = 210
MECA STORES LDG % = 4.85%
ACTUAL STORES LDG % = 5.82%
ACTUAL EO = 20.70%
ADJUSTED CO = 0.00%

+10:510:55

CLASSIFICATION	ACCOUNT	MATERIAL 2019	MATERIAL COST/LOT 2019	LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
#N/A		\$0.00		\$0.00		
Service Overhead	369.100	\$15,573.01		\$34,539.34		
Meter Equip-1st Installation Expense	586.380			\$7,560.84		
Meter Cost (Material)		\$21,042.00	\$100.20			
SERVICE SUBT W/O STORES LDG		\$35,894.66	\$170.93	\$42,100.18	\$200.48	\$371.41
Cond, Primary, AL, thru 3/O	365.002	\$4,903.20		\$26,368.99		
Reclosure, 1 Phase	365.601	\$25,104.13		\$933.73		
PRIMARY SUBT W/O STORES LDG		\$28,619.29	\$136.28	\$27,302.72	\$130.01	\$266.29
Cond, Secondary, AL, thru 4/O	365.040	\$3,352.15		\$18,046.18		
Cable, Secondary, TPX, All	365.091	\$5,706.04		\$7,035.32		
#N/A		\$0.00		\$0.00		
Maintenance of Duct System	594.680	\$0.60		\$16.20		
Maintenance of Overhead Lines	593.180	\$0.00		\$0.00		
SEC SUBT W/O STORES LDG		\$8,639.76	\$41.14	\$25,097.70	\$119.51	\$160.65
Tree Trim (Labor)						
#N/A		\$0.00		\$0.00		
Poles, Wood, 35/40/45 ft	364.135	\$44,687.24		\$87,928.30		
#N/A		\$0.00		\$0.00		
#N/A		\$0.00		\$0.00		
POLE SUBT W/O STORES LDG		\$42,620.16	\$202.95	\$87,928.30	\$418.71	\$621.66
#N/A		\$0.00		\$0.00		
Transformer Installation Labor	583.280					
Transformer, 10-25 KVA	365.001	\$51,473.85		\$41,563.81		
Transformer, 50-75 KVA	368.012	\$6,269.09		\$3,711.05		
TRANSFORMER SUBT W/O STORES LDG		\$55,071.95	\$262.25	\$45,274.86	\$215.59	\$477.84
SUB-TOTAL		\$170,845.82	\$813.55	\$227,703.76	\$1,084.30	\$1,897.85
MATERIAL SUBTOTAL MINUS METER MATERIAL			\$713.35			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG \$			\$47.35			\$47.35
SUBTOTAL			\$860.90		\$1,084.30	\$1,945.20
EO			\$178.21		\$224.45	\$402.66
TOTAL			\$1,039.11		\$1,308.75	\$2,347.86

2019 UG LOW DENSITY LAYOUT WITH 3.5 TON A/C

WR Number
1459058

NUMBER OF LOTS = 2019
210

MECA STORES LDG % = 4.85%

ACTUAL STORES LDG = 5.82%

ACTUAL EO = 20.70%

ADJUSTED CO = 0.00%

CLASSIFICATION	ACCOUNT	MATERIAL 2019	MATERIAL COST/LOT 2019	LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
Service, UG, In Duct	369.600	\$23,506.68		\$126,911.25		
Meter Equip-1st Installation Expense	586.380			\$7,560.84		
Meter Cost (Material)		\$21,042.00	\$100.20			
Service Trench (Labor)				(\$53,802.04)		
SERVICE SUBT W/O STORES LDG		\$43,461.34	\$206.96	\$80,670.05	\$384.14	\$591.10
Duct, Buried (PVC)	366.201	\$19,482.56		\$87,447.78		
Maintenance of Overhead Lines	593.180	\$0.00		\$292.36		
Cable, Primary, 1/C, 2/C, All	367.201	\$32,968.45		\$17,553.86		
PRI/SEC TRENCH				(\$60,634.05)		
PRIMARY SUBT W/O STORES LDG		\$50,024.81	\$238.21	\$44,659.94	\$212.67	\$450.88
Cable, 600V, AL, All	367.122	\$23,502.78		\$20,737.89		
SEC SUBT W/O STORES LDG		\$22,415.62	\$106.74	\$20,737.89	\$98.75	\$205.49
Pad, TX	366.801	\$3,631.24		\$6,713.84		
Transformer, Padmount All	368.501	\$41,886.11		\$9,320.15		
TRANSFORMER SUBT W/O STORES LDG		\$43,411.88	\$206.72	\$16,033.99	\$76.35	\$283.07
PRI/SEC TRENCH				\$60,634.05	\$288.73	\$288.73
SVC TRENCH				\$53,802.04	\$256.20	\$256.20
SUB-TOTAL		\$159,313.65	\$758.63	\$276,537.97	\$1,316.84	\$2,075.47
MATERIAL SUBTOTAL MINUS METER MATERIAL			\$658.43			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG			\$44.15			\$44.15
SUBTOTAL			\$802.78		\$1,316.84	\$2,119.62
EO			\$166.18		\$272.59	\$438.77
TOTAL			\$968.96		\$1,589.43	\$2,558.39

OPERATIONAL COSTS DIFFERENTIAL - LOW DENSITY

<u>Low Density</u>	<u>30-Year NPV (\$ per pole-line mile)</u>			<u>Cost per Lot</u>
	<u>O&M</u>	<u>Capital</u>	<u>Total</u>	
Differential (Non-Storm)	(\$7,359)	(\$144,343)	(\$151,702)	(\$2,103)
<u>Avoided Storm Restoration</u>				
Tier 1 (Full GAF) - 200 or more lots	(\$71,224)		(\$71,224)	(\$827)
Tier 2 (40% GAF) - 85 to 199 lots	(\$28,490)		(\$28,490)	(\$331)
Tier 3 (20% GAF) - less than 85 lots	(\$14,245)		(\$14,245)	(\$165)
<u>Low Density</u>				<u>Cost Differential</u>
Pre-Operational Cost				\$210.53
Post-Operational Cost				
Tier 1 (Full GAF) - 200 or more lots	-----		Note 1	\$0.00
Tier 2 (40% GAF) - 85 to 199 lots	-----			\$0.00
Tier 3 (20% GAF) - less than 85 lots	-----			\$0.00

Note 1: Where the "Post-Operational" Costs are negative, the differentials have been set to \$0.

HIGH DENSITY

OVERHEAD VS. UNDERGROUND SUMMARY SHEET

High Density 176 Lot Subdivision
Company Owned Service Laterals
Cost per Service Lateral

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$993.89	\$1,119.41	\$125.52
MATERIAL	\$779.82	\$648.13	(\$131.69)
TOTAL (1) (2)	\$1,773.71	\$1,767.54	(\$6.17)

(1) Does not include storm or operational costs

(2) The differential has been set to \$0 in the URD filing since the differential is a negative amount.

COST PER SERVICE LATERAL OVERHEAD MATERIAL AND LABORHigh Density 176 Lot Subdivision
Company Owned Service Laterals

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$153.93	\$181.82	\$335.75
Primary	\$67.14	\$65.38	\$132.52
Secondary	\$78.64	\$154.08	\$232.72
Initial Tree Trim	-----	-----	-----
Poles	\$145.26	\$308.04	\$453.30
Transformers	\$165.58	\$114.12	\$279.70
Sub-Total	\$610.55	\$823.44	\$1,433.99
Stores Handling(3)	\$35.53	-----	\$35.53
SubTotal	\$646.08	\$823.44	\$1,469.52
Engineering(5)	\$133.74	\$170.45	\$304.19
TOTAL(6)	\$779.82	\$993.89	\$1,773.71

1 - Includes Sales Tax.

2 - Includes Meters.

3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs

COST PER SERVICE LATERAL UNDERGROUND MATERIAL AND LABORHigh Density 176 Lot Subdivision
Company Owned Service Laterals

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$216.06	\$336.31	\$552.37
Primary	\$124.34	\$141.81	\$266.15
Secondary	\$36.23	\$50.45	\$86.68
Transformers	\$130.82	\$41.54	\$172.36
Prim. & Sec. Trenching	-----	\$174.32	\$174.32
Service Trenching	-----	\$183.00	\$183.00
Sub-Total	\$507.45	\$927.43	\$1,434.88
Stores Handling(3)	\$29.53	-----	\$29.53
SubTotal	\$536.98	\$927.43	\$1,464.41
Engineering(5)	\$111.15	\$191.98	\$303.13
TOTAL(6)	\$648.13	\$1,119.41	\$1,767.54

1 - Includes Sales Tax.

2 - Includes Meters.

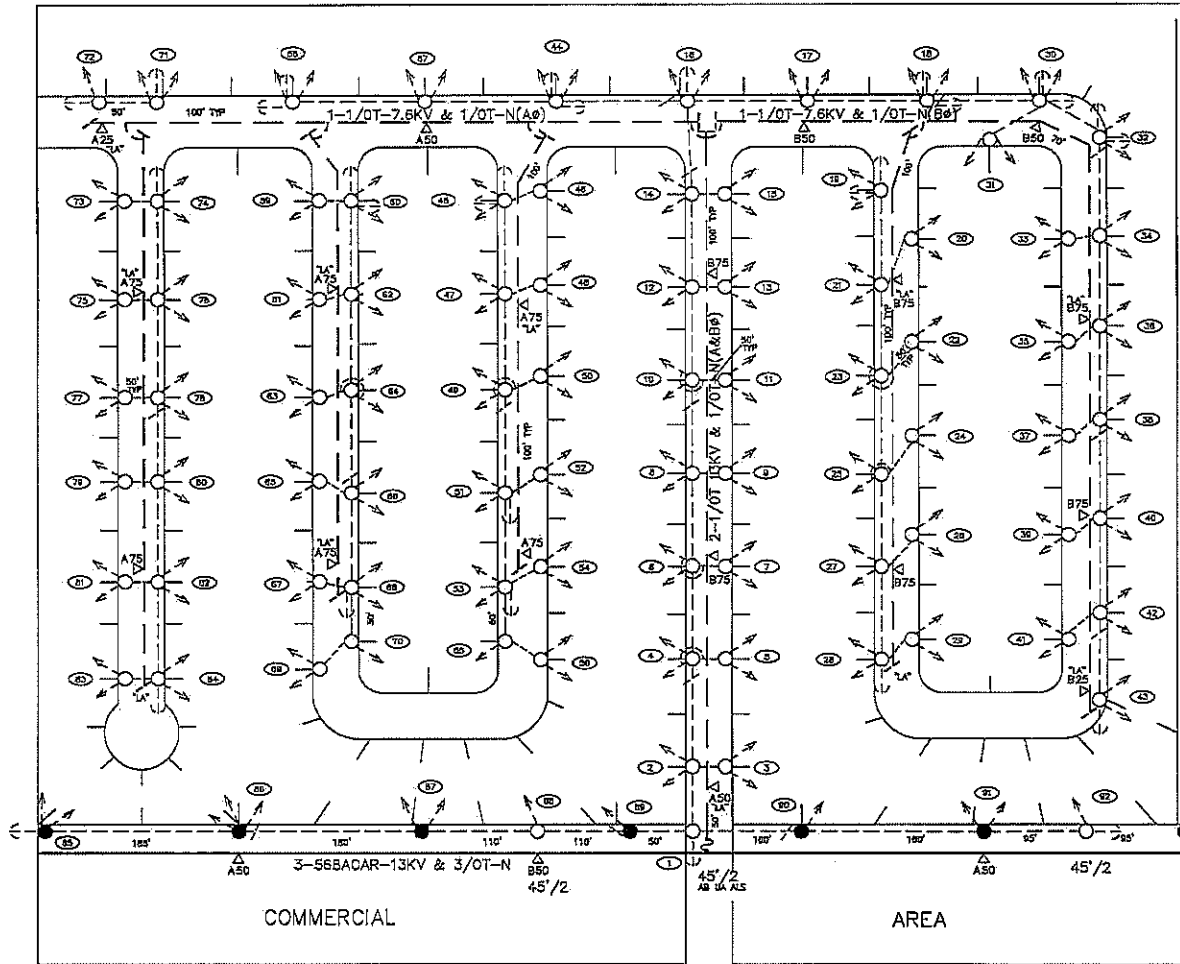
3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs

HAZARDOUS 15KV FUTURE 23KV 23KV SALT SPRAY NULL



NOTES

1. ALL SERVICES ARE #1/0 TPX, 45' LONG
2. ALL GUYS ARE 5/16", 10" SCR, 20' LD
3. ALL PRIMARY GUYS INCLUDE AN FGI.
4. ALL LINE POLES ARE 40' 3 UNLESS OTHERWISE NOTED.
5. ALL SVC POLE ARE 35' 3
6. ALL SEC COND IS 3/0 TPX
7. FRAME LOC. 1 PER E-27.0.0, FIG. 2. INSTALL ALS (PER C-9.6.0)
8. FRAME LOCS 4, 8, 10, & 14 SIMILAR TO E-5.0.0 (2#)
9. FRAME LOCS 2 & 12 SIMILAR TO I-41.0.1, FIG 2
10. FRAME LOC 6 SIMILAR TO I-41.0.1, FIG 1
11. FRAME LOC 16 WITH 2-#5 D.E. VERT
12. FRAME TYP TANG TX POLES (1#) PER I-41.0.0
13. FRAME TYP D.E. TX POLES (1#) PER I-42.0.1, FIG 2A
14. FRAME LOCS 86 & 51 SIMILAR TO I-41.0.1 FIG 2
15. FRAME LOC 88 SIMILAR TO I-41.0.1, FIG 1
16. NEW FACILITIES HAVE BEEN DESIGNED TO 145 MPH EXTREME WINDLOADING CRITERIA
17. PER DCS E-31, AVIAN PROTECTION, HAS BEEN ADDED TO FUSE SWITCHES, L.A.'S TRANSFORMER BUSHINGS, JUMPERS & STINGERS
18. ALL LOCATIONS REQUIRING GROUND INCLUDE B-5' GROUND RODS

LATERAL LOADING

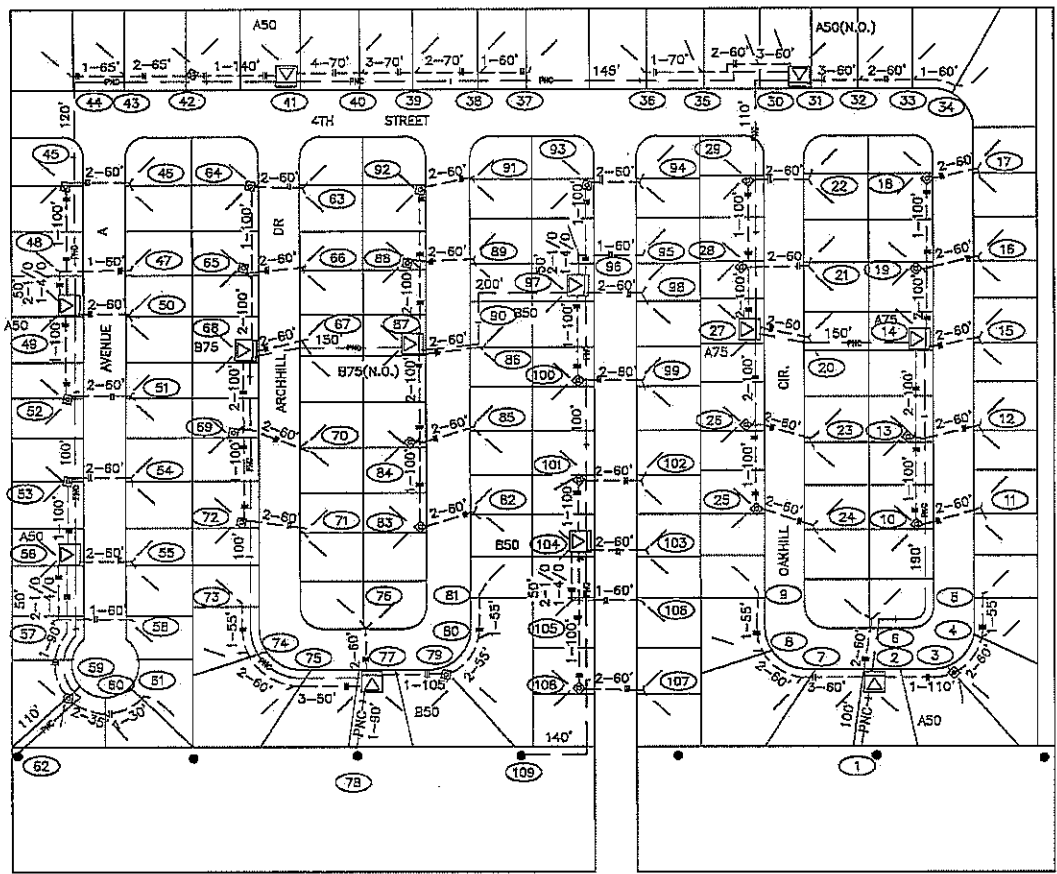
AØ = 575 KVA
BØ = 575 KVA

TOTAL = 1150 KVA (CONNECTED)

PLOT DATE: 3/15/2018 CAD NAME: TSP

3903370	4	03/15/18	ADDED FG TO ALL PRIMARY GUYS AND CHANGED SVC POLES FROM 35' 4 TO 35' 3	AS-BUILT COPY	AS-BUILT CREW PRINT	Drawings	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Survey/Stack	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Work with SHOT	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		DESIGNED BY	M. BOWENHART	Wk. SP HIGH DENSITY 176 LOTS - OVERHEAD 2019 URD TARIFF HARDENING REVISION URDE92
2814589	1	01/03/08	UPDATE TO STORM HARDENING STANDARDS	REVISED	REVISED	Tree Work	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Design/Stack	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	OT/Special Work	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		DRAWN BY	T. COLLINS	
3588243	4	03/23/07	UPDATE DWO WITH METER PEDESTALS	Job CERTIFIED COMPLETED as shown on this AS-BUILT print. Network changes shown on ROS.		Map Printing	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Trench Feet		Back Sock Feet		DATE	03/13/18		
2374153	3	02/21/07	NEW ON TARIFF DESIGN									MAP NO.	ALL		
8484-03-010	0	02/05/97	ORIGINAL DWO	All revisions created from this have been deleted or modified to be with FPL standards. Values are shown at all positions.								DWG NO.	2982370		
AS-BUILT	AUTH. NO.	NO.	DATE	REVISION		Posted by		Telephone Request	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	SATV Request	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	SCALE	1" = 30'	PROJECT NO.	2982370-0029-82-370

UNACCESSIBLE
 12KV
 FUTURE 23KV
 23KV
 SALT SPRAY
 NULL



- NOTES
1. ALL SERVICE CABLES ARE 1/0 TPX (45' LONG).
 2. ALL SECONDARY CABLES ARE 4/0 TPX, UNLESS NOTED.
 3. ALL HANHOLES ARE 24" WITH 5 PORT MULTI-TAPS.
 4. ALL A/C'S ARE 2.5 TON.

A4 400 KVA
 B5 300 KVA
 TOT 700 KVA (CONNECTED)

PLOT DATE: 3/17/2018 CAD NAME: TPO PLOT TIME: 11:33:32 PM

AS-BUILT	ALPH NO.	NO.	DATE	REVISION
	1320347	2	01/29/02	UPDATE TO STEEL HARDENING STANDARDS
	1320347	1	01/04/02	UPGRADE TMS AND ADD MESA LOCATIONS
	8487-02-010	0	02/05/01	ORIGINAL DWG

AS-BUILT COPY	AS-BUILT CREW PRINT	Consent/et	YES <input type="checkbox"/> NO <input type="checkbox"/>	Survey/Status	YES <input type="checkbox"/> NO <input type="checkbox"/>	Work with SMOY	YES <input type="checkbox"/> NO <input type="checkbox"/>
DESIGN	AS-BUILT	Time Work	YES <input type="checkbox"/> NO <input type="checkbox"/>	Designer/Date	YES <input type="checkbox"/> NO <input type="checkbox"/>	CT/Speedy story	YES <input type="checkbox"/> NO <input type="checkbox"/>
JOB CAPTIONED COMPLETED as shown on this AS-BUILT print.	Job/Project	Map Position	YES <input type="checkbox"/> NO <input type="checkbox"/>	French Feet	YES <input type="checkbox"/> NO <input type="checkbox"/>	Book Book Feet	YES <input type="checkbox"/> NO <input type="checkbox"/>
ALL REVISIONS SHALL BE MADE BY THE ORIGINAL DESIGNER OR HIS REPRESENTATIVE. ALL REVISIONS SHALL BE MADE BY THE ORIGINAL DESIGNER OR HIS REPRESENTATIVE.	REVISIONS	City	PL DIST.	COUNTY AIR	STATE RD	FAA	
		ZIP	PR ZONE	COUNTY NO.	TRANCH		
		Phone Request	YES <input type="checkbox"/> NO <input type="checkbox"/>	CATV Request	YES <input type="checkbox"/> NO <input type="checkbox"/>		



DESIGNED BY: M. BONNEVANT
 DRAWN BY: T. COLLINS
 DATE: 03/13/18
 MAP NO.: ALL

U/G LAYOUT
 HIGH DENSITY
 2019 URD TARIFF HARDENING REVISION
 176 LOT SUBDIVISION
 URDE94
 DWG NO. 1320347 TMS 1428-44-883

2019 OH HIGH DENSITY LAYOUT

WR Number:
2982370

2019
NUMBER OF LOTS = 176
MECA STORES LDG % = 4.85%
ACTUAL STORES LDG % = 5.82%
ACTUAL EO = 20.70%

CLASSIFICATION	ACCOUNT	MATERIAL 2019	MATERIAL COST/LOT 2019	LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
Service Overhead	369.100	\$9,915.92		\$25,663.48		
Meter Equip-1st Installation Expense	586.380			\$6,336.70		
Meter Cost (Material)		\$17,635.20	\$100.20			
SERVICE SUBT W/O STORES LDG		\$27,092.44	\$153.93	\$32,000.18	\$181.82	\$335.75
Cond, Primary, AL, thru 3/O	365.002	\$1,800.95		\$10,944.87		
Reclosure, 1 Phase	365.601	\$10,589.50		\$530.13		
PRIMARY SUBT W/O STORES LDG		\$11,817.31	\$67.14	\$11,506.69	\$65.38	\$132.52
Cond, Secondary, AL, thru 4/O	365.040	\$1,537.14		\$9,341.63		
Cable, Secondary, TPX, All	365.091	\$12,975.40		\$17,777.18		
SECONDARY SUBT W/O STORES LDG		\$13,841.24	\$78.64	\$27,118.81	\$154.08	\$232.72
Poles, Wood, 35/40/45 ft	364.135	\$26,805.14		\$54,214.17		
POLE SUBT W/O STORES LDG		\$25,565.23	\$145.26	\$54,214.17	\$308.04	\$453.30
Transformer, 10-25 KVA	368.001	\$1,687.36		\$1,851.23		
Transformer, 50-75 KVA	368.012	\$28,868.57		\$18,233.49		
TRANSFORMER SUBT W/O STORES LDG		\$29,142.52	\$165.58	\$20,084.72	\$114.12	\$279.70
SUB-TOTAL		\$107,458.74	\$610.55	\$144,924.57	\$823.44	\$1,433.99
MATSUB-MTR.(M)			\$510.35			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG			\$35.53			\$35.53
SUBTOTAL			\$646.08		\$823.44	\$1,469.52
EO			\$133.74		\$170.45	\$304.19
TOTAL			\$779.82		\$993.89	\$1,773.71

2019 UG HIGH DENSITY LAYOUT

WR Number
1328347

NUMBER OF LOTS = 2019
176

MECA STORES LDG % = 4.85%

ACTUAL STORES LDG % = 5.82%

ACTUAL EO = 20.70%

CLASSIFICATION	ACCOUNT	MATERIAL		LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
		2019	COST/LOT 2019			
Service, UG, In Duct	369.600	\$21,380.15		\$85,062.30		
Meter Equip-1st Installation Expense	586.380			\$6,336.70		
Meter Cost (Material)		\$17,635.20	\$100.20			
Service Trench (Labor)				(\$32,208.03)		
SERVICE SUBT W/O STORES LDG		\$38,026.38	\$216.06	\$59,190.97	\$336.31	\$552.37
Duct, Buried (PVC)	366.201	\$11,376.17		\$45,296.87		
Cable, Primary, 1/C, 2/C, All	367.201	\$11,568.51		\$10,343.09		
Primary/Secondary Trench (Labor)				(\$30,680.92)		
PRIMARY SUBT W/O STORES LDG		\$21,883.35	\$124.34	\$24,959.04	\$141.81	\$266.15
Cable, 600V, AL, All	367.122	\$6,686.24		\$8,878.55		
SECONDARY SUBT W/O STORES LDG		\$6,376.95	\$36.23	\$8,878.55	\$50.45	\$86.68
Pad, TX	366.801	\$2,135.39		\$3,502.52		
Transformer, Padmount All	368.501	\$22,006.39		\$3,808.52		
TRANSFORMER SUBT W/O STORES LDG		\$23,025.06	\$130.82	\$7,311.04	\$41.54	\$172.36
PRI/SEC TRENCH				\$30,680.92	\$174.32	\$174.32
SVC TRENCH				\$32,208.03	\$183.00	\$183.00
SUB-TOTAL		\$89,311.74	\$507.45	\$163,228.55	\$927.43	\$1,434.88
MATSUB-MTR.(M)			\$407.25			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG			\$29.53			\$29.53
SUBTOTAL			\$536.98		\$927.43	\$1,464.41
EO			\$111.15		\$191.98	\$303.13
TOTAL			\$648.13		\$1,119.41	\$1,767.54

OPERATIONAL COSTS DIFFERENTIAL - HIGH DENSITY

<u>High Density</u>	<u>30-Year NPV (\$ per pole-line mile)</u>			<u>Cost per Lot</u>
	<u>O&M</u>	<u>Capital</u>	<u>Total</u>	
Differential (Non-Storm)	(\$7,257)	(\$143,298)	(\$150,555)	(\$1,796)
 <u>Avoided Storm Restoration</u>				
Tier 1 (Full GAF) - 300 or more lots	(\$82,766)		(\$82,766)	(\$827)
Tier 2 (40% GAF) - 100 to 299 lots	(\$33,106)		(\$33,106)	(\$331)
Tier 3 (20% GAF) - less than 100 lots	(\$16,553)		(\$16,553)	(\$165)
 <u>High Density</u>				
Pre-Operational Cost				Note 1 <u>Cost Differential</u> \$0.00
Post-Operational Cost				
Tier 1 (Full GAF) - 300 or more lots	-----			Note 2 \$0.00
Tier 2 (40% GAF) - 100 to 299 lots	-----			Note 2 \$0.00
Tier 3 (20% GAF) - less than 100 lots	-----			Note 2 \$0.00

Note 1: The "Pre-Operational Cost" differential has been set to \$0 since it is a negative amount.

Note 2: Where the "Post-Operational Costs" are negative, the differentials have been set to \$0.

METER PEDESTAL

OVERHEAD VS. UNDERGROUND SUMMARY SHEET

High Density 176 Lot Subdivision
Customer Owned Service Laterals from Meter Centers
Cost per Dwelling Unit

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$738.39	\$586.30	(\$152.09)
MATERIAL	\$659.44	\$539.19	(\$120.25)
TOTAL (1) (2)	\$1,397.83	\$1,125.49	(\$272.34)

(1) Does not include storm or operational costs

(2) The differential has been set to \$0 in the URD filing since the differential is a negative amount.

COST PER DWELLING UNIT OVERHEAD MATERIAL AND LABOR

High Density 176 Lot Subdivision
 FPL Service Drop and Customer Owned Service Laterals from Meter Centers

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$124.92	\$107.38	\$232.30
Primary	\$65.52	\$62.49	\$128.01
Secondary	\$57.24	\$118.85	\$176.09
Initial Tree Trim	-----	-----	-----
Poles	\$103.23	\$209.99	\$313.22
Transformers	\$165.39	\$113.05	\$278.44
Sub-Total	\$516.30	\$611.76	\$1,128.06
Stores Handling(3)	\$30.05	-----	\$30.05
SubTotal	\$546.35	\$611.76	\$1,158.11
Engineering(5)	\$113.09	\$126.63	\$239.72
TOTAL(6)	\$659.44	\$738.39	\$1,397.83

1 - Includes Sales Tax.

2 - Includes Meters.

3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs

COST PER DWELLING UNIT UNDERGROUND MATERIAL AND LABOR

High Density 176 Lot Subdivision
Customer Owned Service Laterals from Meter Centers

ITEM	MATERIAL(1)	LABOR(4)	TOTAL
Service(2)	\$100.20	\$84.61	\$184.81
Primary	\$128.11	\$126.14	\$254.25
Secondary	\$76.01	\$95.59	\$171.60
Transformers	\$117.83	\$35.25	\$153.08
Prim. & Sec. Trenching	-----	\$144.16	\$144.16
Service Trenching	-----	-----	-----
Sub-Total	\$422.15	\$485.75	\$907.90
Stores Handling(3)	\$24.57	-----	\$24.57
SubTotal	\$446.72	\$485.75	\$932.47
Engineering(5)	\$92.47	\$100.55	\$193.02
TOTAL(6)	\$539.19	\$586.30	\$1,125.49

1 - Includes Sales Tax.

2 - Includes Meters.

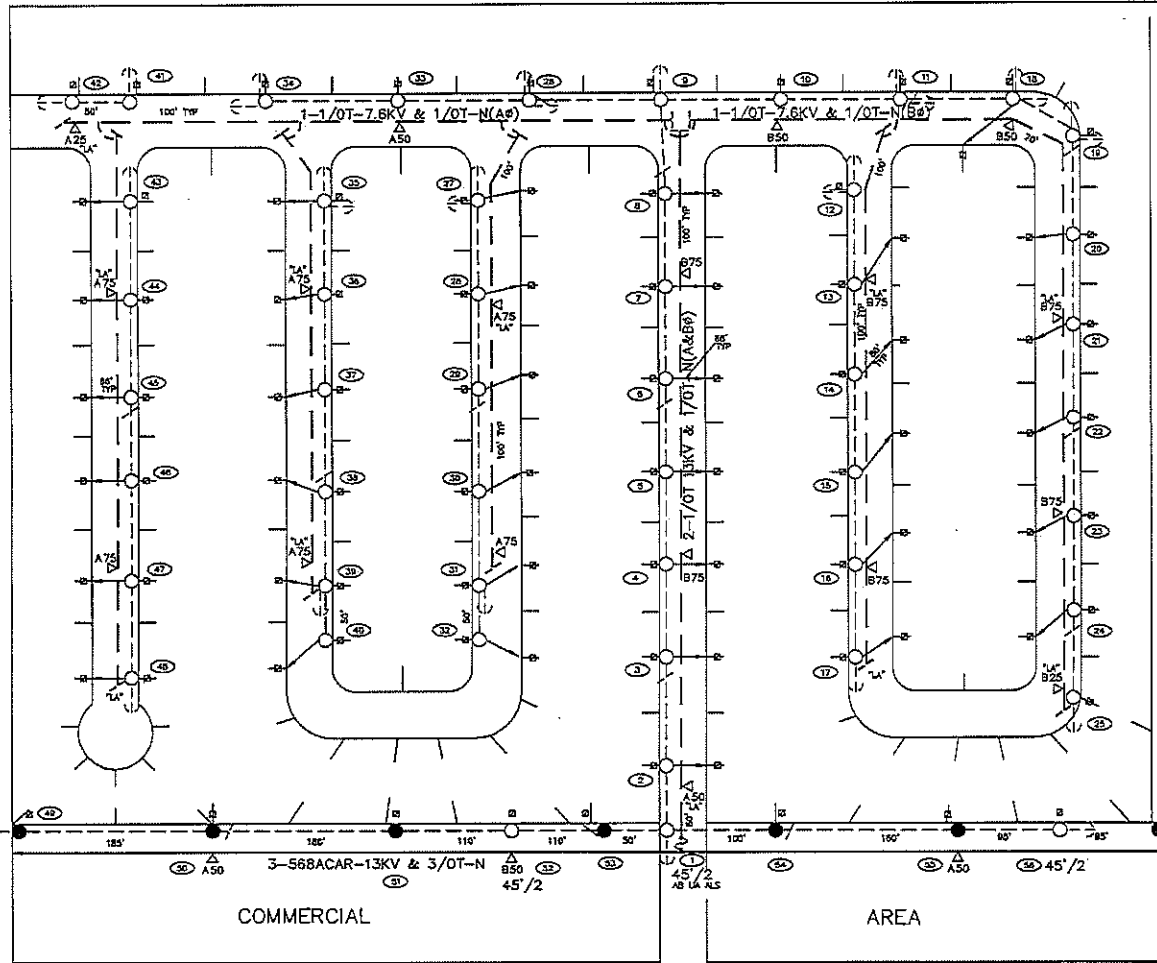
3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7 % of All Material and Labor.

6 - Does not include storm or operational costs

ACCESSIBLE 13KV FUTURE 23KV 23KV SALT SPRAY MALL



NOTES

1. ALL GUYS ARE 5/16", 6" SCR, 20' LD
2. ALL PRIMARY GUYS INCLUDE AN FGI
3. ALL SVC'S TO CURT. METER PEDESTALS ADJACENT TO LINE POLES ARE 1/0 TPX, 16" LONG. SERVICES CROSSING ROADS ARE 1/0 TPX, LENGTH VARIES.
4. ALL POLES ARE 40' 3/4 UNLESS NOTED OTHERWISE.
5. ALL SEC. CONDS. ARE 3/0 TPX.
INSTALL ALS (PER C-9.5.0.)
6. FRAME LOC 1 PER E-27.0.0, FIG 2
7. FRAME LOCS 3, 5, 6, & 8 SIMILAR TO E-5.0.0(2)
8. FRAME LOCS 2 & 7 SIMILAR TO I-41.0.1, FIG 2
9. FRAME LOC 4 SIMILAR TO I-41.0.1, FIG 1
10. FRAME LOC 9 WITH 2#S D.E. VERT
11. FRAME TYP TANG TX POLES (14) PER I-41.0.0
12. FRAME TYP D.E. TX POLES (14) PER I-42.0.1, FIG 2A
13. FRAME SLOCS 50 & 55 SIMILAR TO I-41.0.1, FIG 1
14. FRAME LOC 52 SIMILAR TO I-41.0.1, FIG 1
15. NEW FACILITIES HAVE BEEN DESIGNED TO 145 MPH EXTREME WINDLOADING CRITERIA.
16. PER DCS E-31, ARIAN PROTECTION HAS BEEN ADDED TO FUSE SWITCHES, L.A.'S, TRANSFORMER BUSHINGS, JUMPERS AND SWINGERS
17. ALL LOCATIONS REQUIRING GROUND INCLUDE 8-5' GROUND RODS

LATERAL LOADING

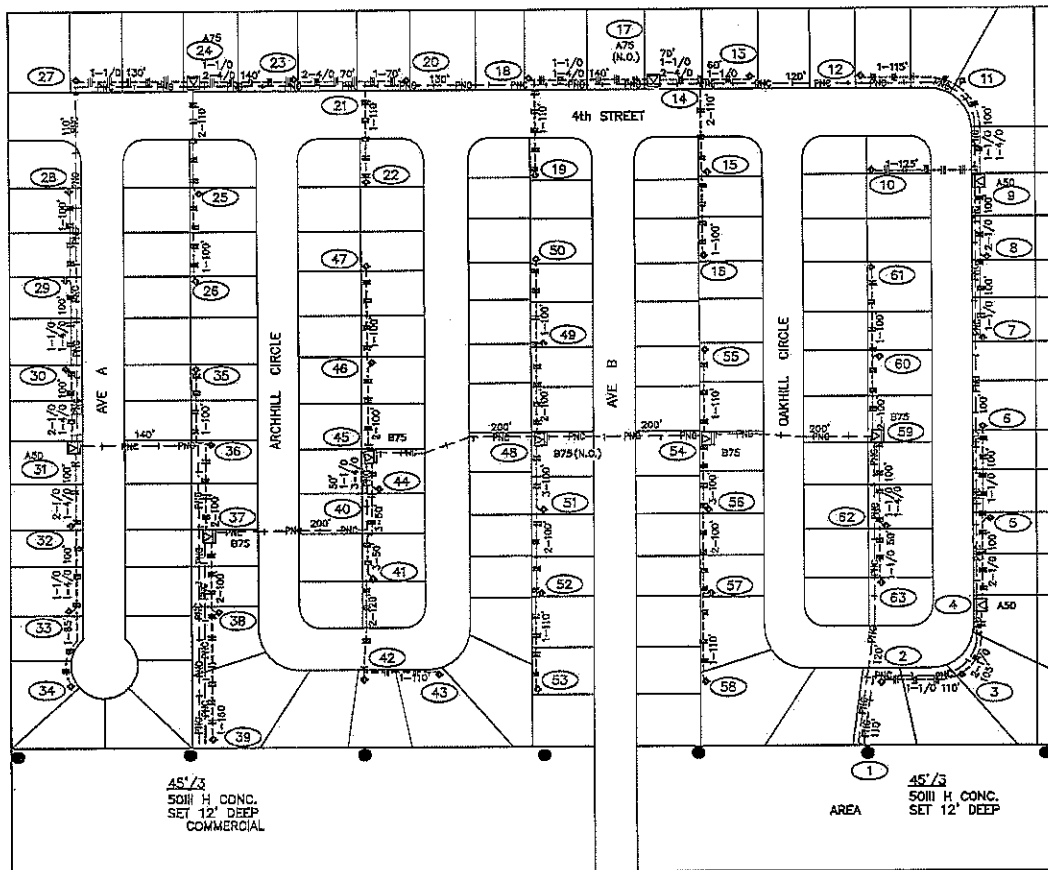
As = 575 KVA
B# = 525 KVA
TOTAL = 1150 KVA (CONNECTED)

PLOT DATE: 5/15/2019
 PLOT TIME: 11:47:43 PM
 CAD: ANDRE, INC.

2983564	4	05/15/19	ADDED PG TO ALL PRIMARY GUYS AND CHANGED SVC POLES FROM 35'4 TO 35'3	AS-BUILT COPY	AS-BUILT DREW PRINT	Comment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Survey/Status?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Work with SMO?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DESIGNED BY	M. BONDORANT	W/A SP METER PEDESTALS 176 LOTS - OVERHEAD 2019 URD TARIFF HARDENING REVISION URDESS
N/A	3	07/06/04	ADDED ALS	TEST	DESIGN	Tree Work?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Designer/Status?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CI/Speeded MVT?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		DRAWN BY	T. COLLINS	
1324815	2	01/23/07	ELIM BACKGROUND	NO CERTIFIED COMPLETED as shown on this AS-BUILT print. Material changes shown on RDS.	NO CERTIFIED COMPLETED as shown on this AS-BUILT print. Material changes shown on RDS.	Map Posting?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Trench Feet		Dust Bank Feet		DATE	03/15/19		
1324818	1	01/04/03	EXT POLE SIZE	PROPERTY NOTES	PROPERTY NOTES	City		Dist. Dist.		State Rd		MAP NO.	ALL		
5484-04-010	0	02/05/97	ORIGINAL DWG	All required ground rods have been drawn & verified to be within FPL Standards. Values are shown at all locations.	All required ground rods have been drawn & verified to be within FPL Standards. Values are shown at all locations.	County		County AR		FAA		Scale	0 25 50 100 FEET		
AS-BUILT	AUTH NO.	NR.	DATE	REVISION	REVISION	Posted by		Telephone Request?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CATV Request?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	DWG NO.	2983564		

2983564-029-83-564

INACCESSIBLE 15KV FUTURE 21KV 21KV SALT-SPRAY MULL




- NOTES:
 1. ALL SECONDARY IS 4/0 UNLESS NOTED.
 2. ALL HH'S ARE 24" WITH 3 PORT (2SVCS) OR 5 PORT (3-4 SVCS) MULTITAPS.
 3. NEW FACILITIES HAVE BEEN DESIGNED TO 145 MPH EXTREME WINDLOADING CRITERIA

AP 300 KVA
 BP 375 KVA
 TOT 675 KVA (CONNECTED)

PLOT DATE: 3/15/2019 PLOT TIME: 10:28:18 AM CADD BOARD: TPO

ASSEMBLY	AUTH NO.	NO.	DATE	REVISION
	1368883	2	01/20/19	UPDATE TO STORM HARDENING STANDARDS
	1368883	1	01/04/19	ADD METER LOCATIONS
	6495-03-010	0	02/05/17	ORIGINAL DWG

AS-BUILT COPY	AS-BUILT CREW PRINT	Excavated?	Survey/Stack?	Work with SMO?
<input type="checkbox"/>	<input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Tree Work? YES <input type="checkbox"/> NO <input type="checkbox"/>	Designer/Stack? YES <input type="checkbox"/> NO <input type="checkbox"/>	C/S/Spec'd M/T YES <input type="checkbox"/> NO <input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Map Posting? YES <input type="checkbox"/> NO <input type="checkbox"/>	Stench Feet? YES <input type="checkbox"/> NO <input type="checkbox"/>	Best Bank Test? YES <input type="checkbox"/> NO <input type="checkbox"/>
<small>All revisions shown in blue. New lines drawn & revised to be in blue. PFI, contractor, volume are shown at all locations.</small>		<small>City</small> _____ <small>Dir. Dist.</small> _____ <small>County</small> _____ <small>State</small> _____ <small>Rd</small> _____ <small>FAA</small> _____ <small>Spec</small> _____ <small>WAD</small> _____ <small>RR</small> _____ <small>County Rd.</small> _____ <small>Transm.</small> _____	Pooled by _____ Telephone Request? YES <input type="checkbox"/> NO <input type="checkbox"/> CITY Request? YES <input type="checkbox"/> NO <input type="checkbox"/>	


 DESIGNED BY: M. BENDERMAN
 DRAWN BY: T. COLLINS
 DATE: 03/13/2019
 MAP NO.: ALL
 SCALE: 0 50 100 200 FEET

U/G SP
 U.G. LAYOUT
 METER PEDESTAL
 .2019 URD TARIFF HARDENING REVISION
 175 LOT SUBDIVISION
 URDE95
 DWG NO. 1368886 REV: 2435-44-883

2019 OH METER PEDESTAL LAYOUT

WR Number
2983564

NUMBER OF LOTS = 2019
176

MECA STORES LDG % = 4.85%

ACTUAL STORES LDG % = 5.82%

ACTUAL EO = 20.70%

ADJUSTED CO = 0.00%

CLASSIFICATION	ACCOUNT	MATERIAL		LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
		2019	COST/LOT 2019			
Service Overhead	369.100	\$4,562.10		\$12,561.67		
Meter Equip-1st Installation Expense	586.380			\$6,336.70		
Meter Cost (Material)		\$17,635.20	\$100.20			
SERVICE SUBT W/O STORES LDG		\$21,986.27	\$124.92	\$18,898.37	\$107.38	\$232.30
Cond, Primary, AL, thru 3/O	365.002	\$1,757.35		\$10,375.61		
Cond, Pri, AL, 343 - 1431	365.011	\$0.00		\$10.08		
Reclosure, 1 Phase	365.601	\$10,333.13		\$512.15		
Maintenance of Overhead Lines	593.180	\$0.00		\$100.08		
PRIMARY SUBT W/O STORES LDG		\$11,531.22	\$65.52	\$10,997.92	\$62.49	\$128.01
Cond, Secondary, AL, thru 4/O	365.040	\$1,499.93		\$8,857.23		
Cable, Secondary, TPX, All	365.091	\$9,062.03		\$12,060.02		
SECONDARY SUBT W/O STORES LDG		\$10,073.40	\$57.24	\$20,917.26	\$118.85	\$176.09
Poles, Wood, 35/40/45 ft	364.135	\$19,049.93		\$36,957.57		
POLE SUBT W/O STORES LDG		\$18,168.75	\$103.23	\$36,957.57	\$209.99	\$313.22
Transformer, 10-25 KVA	368.001	\$1,685.35		\$1,833.97		
Transformer, 50-75 KVA	368.012	\$28,834.30		\$18,063.53		
TRANSFORMER SUBT W/O STORES LDG		\$29,107.92	\$165.39	\$19,897.50	\$113.05	\$278.44
SUB-TOTAL		\$90,867.56	\$516.30	\$107,668.62	\$611.76	\$1,128.06
MATSUB-MTR.(M)			\$416.10			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG			\$30.05			\$30.05
SUBTOTAL			\$546.35		\$611.76	\$1,158.11
EO			\$113.09		\$126.63	\$239.72
TOTAL			\$659.44		\$738.39	\$1,397.83

2019 UG METER PEDESTAL LAYOUT

WR Number
1368886

NUMBER OF LOTS = 2019
176

MECA STORES LDG % = 4.85%

ACTUAL STORES LDG% = 5.82%

ACTUAL EO = 20.70%

ADJUSTED CO = 0.00%

CLASSIFICATION	ACCOUNT	MATERIAL		LABOR 2019	LABOR COST/LOT 2019	TOTAL LABOR & MATERIAL 2019
		2019	COST/LOT 2019			
Service, UG, In Duct	369.699	\$0.00		\$8,554.55		
Meter Equip-1st Installation Expense	586.380			\$6,336.70		
Meter Cost (Material)		\$17,635.20	\$100.20			
SERVICE SUBT W/O STORES LDG		\$17,635.20	\$100.20	\$14,891.25	\$84.61	\$184.81
Duct, Buried (PVC)	366.201	\$12,244.33		\$39,078.62		
Cable, Primary, 1/C, 2/C, All	367.201	\$11,396.72		\$8,494.49		
Primary/Secondary Trench (Labor)				(\$25,371.81)		
PRIMARY SUBT W/O STORES LDG		\$22,547.49	\$128.11	\$22,201.30	\$126.14	\$254.25
Cable, 600V, AL, All	367.122	\$14,025.97		\$16,823.43		
SECONDARY SUBT W/O STORES LDG		\$13,377.18	\$76.01	\$16,823.43	\$95.59	\$171.60
Pad, TX	366.801	\$2,264.85		\$2,977.59		
Transformer, Padmount All	368.501	\$19,478.30		\$3,226.56		
TRANSFORMER SUBT W/O STORES LDG		\$20,737.39	\$117.83	\$6,204.15	\$35.25	\$153.08
PRI/SEC TRENCH				\$25,371.81	\$144.16	\$144.16
SVC TRENCH				\$0.00	\$0.00	
SUB-TOTAL		\$74,297.26	\$422.15	\$85,491.94	\$485.75	\$907.90
MATSUB-MTR.(M)			\$321.95			
STORES LDG. %			5.82%			
METER STORES LDG %			5.82%			
TOTAL STORES LDG			\$24.57			\$24.57
SUBTOTAL			\$446.72		\$485.75	\$932.47
EO			\$92.47		\$100.55	\$193.02
TOTAL			\$539.19		\$586.30	\$1,125.49

OPERATIONAL COSTS DIFFERENTIAL - METER PEDESTAL

<u>Meter Pedestal</u>	<u>30-Year NPV (\$ per pole-line mile)</u>			<u>Cost per Lot</u>
	<u>O&M</u>	<u>Capital</u>	<u>Total</u>	
Differential (Non-Storm)	(\$7,257)	(\$143,298)	(\$150,555)	(\$1,796)
 <u>Avoided Storm Restoration</u>				
Tier 1 (Full GAF) - 300 or more lots	(\$82,766)		(\$82,766)	(\$827)
Tier 2 (40% GAF) - 100 to 299 lots	(\$33,106)		(\$33,106)	(\$331)
Tier 3 (20% GAF) - less than 100 lots	(\$16,553)		(\$16,553)	(\$165)
 <u>Meter Pedestal</u>				
Pre-Operational Cost			Note 1	<u>Differential</u> \$0.00
Post-Operational Cost				
Tier 1 (Full GAF) - 300 or more lots	-----			\$0.00
Tier 2 (40% GAF) - 100 to 299 lots	-----			\$0.00
Tier 3 (20% GAF) - less than 100 lots	-----			\$0.00

Note 1: The "Pre-Operational Cost" differential has been set to \$0 since it is a negative amount.

Note 2: Where the "Post-Operational Costs" are negative, the differentials have been set to \$0.

FEEDER COST

AVERAGE UNDERGROUND FEEDER COST

<u>Underground</u>	<u>Overhead</u>	<u>Difference</u>
\$/Ft.....\$33.54	\$/Ft.....\$23.44	\$/Ft..... \$10.09

AVERAGE UNDERGROUND LATERAL COST

<u>1 Phase Underground</u>	<u>1 Phase Overhead</u>	<u>Difference</u>
\$/Ft.....\$9.41	\$/Ft.....\$8.43	\$/Ft..... \$0.98

<u>2 Phase Underground</u>	<u>2 Phase Overhead</u>	<u>Difference</u>
\$/Ft.....\$13.88	\$/Ft.....\$10.86	\$/Ft..... \$3.02

<u>3 Phase Underground</u>	<u>3 Phase Overhead</u>	<u>Difference</u>
\$/Ft.....\$18.18	\$/Ft.....\$13.48	\$/Ft..... \$4.70

NOTE: Feeder estimates based on three phase requirements.
See Exhibit XIIA for details.

2019 URD TARIFF
FEEDER/LATERAL COST¹

Feeder Length (Ft) =	25,428
UG Feeder Cost =	\$937,867.68
26 UG Lateral Risers not required if UG Feeder is used	
Cost of each Lateral Riser =	\$3,273.30
26 Lateral Risers X \$3,273.30 =	<u>(\$85,105.80)</u>
Net UG Feeder Cost =	\$852,761.88
UG Feeder per foot cost =	\$33.54
OH Feeder Cost =	\$596,138.34
OH Feeder per foot cost =	\$23.44
Feeder Differential Cost =	\$10.09
Padmounted Switch cabinet weighted cost (Each) ² =	\$25,716.84

- NOTES:**
- (1) These per foot costs include cable-in-conduit and cable pull boxes.
 - (2) Differential cost based on padmounted switch vs. overhead switch average installed cost weighted by quantity of each switch installed. This cost is identical to the padmounted switch cost in the UCD Tariff.

2019 URD TARIFF

LATERAL COST³

Lateral Length = 1000 Feet

1 Phase UG Lateral Cost =	\$9,411.47
1 Phase UG Lateral Cost Per Foot =	\$9.41
1 Phase Overhead Lateral Cost =	\$8,431.63
1 Phase Overhead Lateral Cost Per Foot =	\$8.43
1 Phase Lateral Differential Cost =	\$0.98
2 Phase UG Lateral Cost =	\$13,878.94
2 Phase UG Lateral Cost Per foot =	\$13.88
2 Phase OH Lateral Cost =	\$10,855.71
2 Phase OH Lateral Cost Per foot =	\$10.86
2 Phase Lateral Differential Cost =	\$3.02
3 Phase UG Lateral Cost =	\$18,178.83
3 Phase UG Lateral Cost Per foot =	\$18.18
3 Phase OH Lateral Cost =	\$13,480.95
3 Phase OH Lateral Cost Per foot =	\$13.48
3 Phase Lateral Differential Cost =	\$4.70

NOTE: (3) These costs include cable-in-conduit only (no pull boxes).

CONDUIT CREDITS

2019 URD TARIFF

URD BASIS ADDENDUM TO APPENDIX NO. 3

10.3.3 Conduit Installation Credits

1. Low Density

Pri/Sec =	174.09 MH X	\$140.23 /MH =.....	\$24,412.64
			<u>210</u> Lots
			\$ 116.25 /Lot

Svc =.....	102.9 MH X	\$140.23 /MH =.....	\$14,429.67
			<u>210</u> Lots
			\$ 68.71 /Lot

2. High Density

Pri/Sec =	91.04 MH X	\$140.23 /MH =.....	\$12,766.54
			<u>176</u> Lots
			\$ 72.54 /Lot

Svc =.....	70.4 MH X	\$140.23 /MH =.....	\$9,872.19
			<u>176</u> Lots
			\$ 56.09 /Lot

3. Meter Pedestals

Pri/Sec =	74.24 MH X	\$140.23 /MH =.....	\$10,410.68
			<u>176</u> Lots
			\$ 59.15 /Lot

**BACK-UP CALCULATIONS FOR CHANGES TO COSTS IN SECTIONS 10.2.11,
10.3.3, 10.4.3 and 10.5.4**

10.5.4 Replace Existing Service
2" PVC 0.005 MH X \$140.23 /MH X 63 Ft.=..... \$44.17 /Lot

10.4.3 UG Service from OH Lines
2" PVC 0.005 MH X \$140.23 /MH =..... \$0.70 /Ft.
LARGER THAN 2" PVC 0.007 MH X \$140.23 /MH =..... \$0.98 /Ft.

10.3.3.d. Credit for Installation of Conduit
2" PVC 0.005 MH X \$140.23 /MH =..... \$0.70 /Ft.
LARGER THAN 2" PVC 0.007 MH X \$140.23 /MH =..... \$0.98 /Ft.

10.2.11 Extensions of Service Beyond Point of Delivery

<u>CABLE MATERIAL</u>	\$0.88 /Ft. X	1.0582 Stores Loading =	\$0.93 /Ft.
	\$0.93 /Ft. X	1.207 EO =	\$1.12 /Ft.
<u>CABLE PULL</u>	\$140.23 /MH X	0.003 MH =.....	\$ 0.42 /Ft.
	\$ 0.42 /Ft. X	1.207 EO =	\$0.51 /Ft.
<u>CONDUIT MATERIAL</u>	\$0.41 /Ft. X	1.0582 Stores Loading =	\$0.44 /Ft.
	\$0.44 /Ft. X	1.207 EO =	\$0.53 /Ft.
<u>CONDUIT LABOR</u>	\$140.23 /MH X	0.005 MH =.....	\$0.70 /Ft.
	\$0.70 /Ft. X	1.207 EO =	\$0.84 /Ft.
<u>TRENCH</u>	\$140.23 /MH X	0.029 MH =.....	\$4.07 /Ft.
	\$4.07 /Ft. X	1.207 EO =	<u>\$4.91</u> /Ft.
		TOTAL.....	\$7.91 /Ft.

When Customer Provides Trench and Conduit Installation

\$1.12	+	\$0.51	+	\$0.53 =.....	\$2.16 /Ft.
Cable Material	+	Pull Labor	+	Conduit Material	

TRENCH CREDITS

**RISER TO HANDHOLE COST
AND SERVICE LATERAL DIFFERENTIAL**

**2019 URD TARIFF
RISER TO HANDHOLE COST**

Overhead

<u>Material</u>	<u>Labor</u>	<u>Total</u>
\$89.67	\$202.08	\$291.75

Underground

<u>Material</u>	<u>Labor</u>	<u>Total</u>
\$396.68	\$662.90	<u>\$1,059.58</u>

DIFFERENTIAL = \$767.83

SERVICE LATERAL DIFFERENTIAL - LOW DENSITY

	<u>Underground</u>	<u>Overhead</u>
Material	\$131.76	\$88.70
Labor	\$486.06	\$201.26
Stores loading	\$7.67	\$5.16
EO	<u>\$129.48</u>	<u>\$61.09</u>
Total	\$754.97	\$356.21

UNDERGROUND	\$754.97
OVERHEAD	<u>(\$356.21)</u>
DIFFERENTIAL =	\$398.76

2019 URD TARIFF

SERVICE LATERAL DIFFERENTIAL - HIGH DENSITY

	<u>Underground</u>	<u>Overhead</u>
Material	\$106.36	\$73.90
Labor	\$392.67	\$181.82
Stores loading	\$6.19	\$4.30
EO	<u>\$104.58</u>	<u>\$53.82</u>
Total	\$609.80	\$313.84

UNDERGROUND	\$609.80
OVERHEAD	<u>(\$313.84)</u>
DIFFERENTIAL =	\$295.96

APPENDIX 1
UCD

**LEGISLATIVE TARIFF
UCD**

(Continued from Sheet No. 6.510)

13.2.12 Contribution by Applicant

The Applicant shall pay the Company the average differential cost between installing overhead and underground distribution facilities based on the following:

- a) Primary lateral, riser (if from overhead termination point), pad mounted transformer and trench with cable-in-conduit not to exceed 150 feet in radials and 300 feet in loops.

	<u>Applicant's Contribution</u>	
	<u>From Overhead Termination Point</u>	<u>From Existing Underground Termination Point</u>
1) Single phase radial	\$ 0.00	\$ 0.00
2) Two phase radial	\$ 0.00	\$ 0.00
3) Three phase radial (150 KVA)	\$ 0.00	\$ 0.00
4) Three phase radial (300 KVA)	\$ 0.00	\$ 0.00
5) Single phase loop	\$ 0.00	\$ 0.00
6) Two phase loop	\$ 0.00	\$ 0.00
7) Three phase loop (150 KVA)	\$ 0.00	\$ 0.00
8) Three phase loop (300 KVA)	\$ 0.00	\$ 0.00

- b) Secondary riser and lateral, excluding handhole or junction box, with connection to Applicant's service cables no greater than 20 feet from Company riser pole.

1) Small single phase	\$ 552,556 01.33
2) Large single phase	\$ 4,025,921 085.49
3) Small three phase	\$ 801,928 84.63
4) Large three phase	\$ 4,530,591 609.40

- c) FPL service cable installed in customer provided and customer installed 2" PVC (for main line switch size limited to 60 amps for 120V, 2 wire service, or 125 amps for 120/240v, 3 wire service) where customer's meter can is at least 5 feet and no more than 100 feet from the FPL pole.

	<u>120v 60 amp 2 wire service</u>	<u>120/240v 125 amp 3 wire service</u>
1) Installed on a wood pole - accessible locations	\$ 474,235 06.26	\$ 434,804 63.18
2) Installed on a wood pole - inaccessible locations	\$ 545,295 84.61	\$ 493,545 28.23
3) Installed on a concrete pole - accessible locations	\$ 526,625 69.74	\$ 487,195 26.65

- d) Handholes and Padmounted Secondary Junction Box, excluding connections.

1) Handhole	
a. Small - per handhole	\$ 203,402 32.68
b. Intermediate - per handhole	\$ 241,532 86.94
c. Large - per handhole	\$ 847,305 33.21

2) Pad Mounted secondary Junction Box – per box	\$ 2,567,293 226.71
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- 3) Pad Mounted secondary Junction Cabinet, used when electrical loads exceed the capacity of the secondary junction box (above) or when the number of the service conductors exceed the capacity of the pad mounted transformer. This charge is only applicable if the majority of the customer's service conductor diameter is less than 500 MCM.

Per cabinet (includes connecting up to 12 sets of conductor)	\$ 10,992,181 704.68
Tapping service conductors (if more than 12 sets) – per set	\$ 79,208 88.00

(Continued on Sheet No. 6.530)

(Continued from Sheet No. 6.520)

- e) Primary splice box including splices and cable pulling set-up.

1) Single Phase - per box	<u>\$1,349,641,109.75</u>
2) Two Phase - per box	<u>\$1,859,161,660.91</u>
3) Three Phase - per box	<u>\$2,070,151,867.45</u>

- f) Additional installation charge for underground primary laterals including trench and cable-in-conduit which exceed the limits set in 13.2.12 a).

1) Single Phase - per foot	\$ <u>0.710.98</u>
2) Two Phase - per foot	\$ <u>2.723.02</u>
3) Three Phase - per foot	\$ <u>2.481.81</u>

- g) Additional installation charge for underground primary laterals including trench and cable-in-conduit extended beyond the Company designated point of delivery to a remote point of delivery.

1) Single Phase - per foot	\$ <u>8.749.41</u>
2) Two Phase - per foot	\$ <u>43.0313.88</u>
3) Three Phase - per foot	\$ <u>45.2615.29</u>

- h) The above costs are based upon arrangements that will permit serving the local underground distribution system within the commercial/industrial development from overhead feeder mains. If feeder mains within the commercial/industrial development are deemed necessary by the company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the company the average differential cost between such underground feeder mains within the commercial/industrial development and equivalent overhead feeder mains, as follows:

	Applicant's Contribution
Cost per foot of feeder trench within the commercial/industrial development (excluding switches)	\$ <u>9.0210.09</u>
Cost per <u>above ground padmounted</u> switch package	<u>\$27,200.4325,716.84</u>

- i) The Company will provide one standby/assistance appointment at no additional charge to the Applicant adding new or additional load to assist with installation of the Applicant's conductors and conduit(s) into a padmounted transformer, pedestal or vault (not to exceed four hours in duration) during normal hours of operation. Additional appointments will be provided upon request, at the Applicant's expense.

(Continued on Sheet 6.540)

(Continued from Sheet No. 6.530)

13.2.13 Contribution Adjustments

- a) Credits will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant provides trenching and backfilling for the Company's facilities.

	Credit to the Applicant's Contribution
1) Credit per foot of primary trench	\$ 2,484.07
2) Credit per foot of secondary trench	\$ 2,763.23

- b) Credits will be allowed to the Applicant's contribution in section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided conduit per Company instructions.

1) Credit per foot of 2" conduit	\$ 0,600.70
2) Credit per foot of larger than 2" conduit	\$ 0,840.98

- c) Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs a Company-provided handhole per Company instructions,

1) Credit per large handhole/primary splice box	\$ 232,782.05
2) Credit per small handhole	\$ 64,407.52

- d) Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs a Company-provided concrete pad for a pad-mounted transformer or pad-mounted capacitor bank per Company instructions,

Credit per pad	\$ 60,007.12
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- e) Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided concrete pad for a pad-mounted feeder switch chamber per Company instructions,

Credit per pad	\$ 65,456.48
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- f) Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided concrete pad for a feeder splice box per Company instructions,

Credit per splice box	\$ 64,747.87
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**FINAL TARIFF
UCD**

(Continued from Sheet No. 6.510)

13.2.12 Contribution by Applicant

The Applicant shall pay the Company the average differential cost between installing overhead and underground distribution facilities based on the following:

- a) Primary lateral, riser (if from overhead termination point), pad mounted transformer and trench with cable-in-conduit not to exceed 150 feet in radials and 300 feet in loops.

	<u>Applicant's Contribution</u>	
	<u>From Overhead Termination Point</u>	<u>From Existing Underground Termination Point</u>
1) Single phase radial	\$ 0.00	\$ 0.00
2) Two phase radial	\$ 0.00	\$ 0.00
3) Three phase radial (150 KVA)	\$ 0.00	\$ 0.00
4) Three phase radial (300 KVA)	\$ 0.00	\$ 0.00
5) Single phase loop	\$ 0.00	\$ 0.00
6) Two phase loop	\$ 0.00	\$ 0.00
7) Three phase loop (150 KVA)	\$ 0.00	\$ 0.00
8) Three phase loop (300 KVA)	\$ 0.00	\$ 0.00

- b) Secondary riser and lateral, excluding handhole or junction box, with connection to Applicant's service cables no greater than 20 feet from Company riser pole.

1) Small single phase	\$601.33
2) Large single phase	\$1,085.49
3) Small three phase	\$884.63
4) Large three phase	\$1,609.40

- c) FPL service cable installed in customer provided and customer installed 2" PVC (for main line switch size limited to 60 amps for 120V, 2 wire service, or 125 amps for 120/240v, 3 wire service) where customer's meter can is at least 5 feet and no more than 100 feet from the FPL pole.

	<u>120v 60 amp 2 wire service</u>	<u>120/240v 125 amp 3 wire service</u>
1) Installed on a wood pole - accessible locations	\$ 506.26	\$ 463.18
2) Installed on a wood pole - inaccessible locations	\$ 584.61	\$ 528.23
3) Installed on a concrete pole - accessible locations	\$ 569.74	\$ 526.65

- d) Handholes and Padmounted Secondary Junction Box, excluding connections.

1) Handhole	
a. Small - per handhole	\$232.68
b. Intermediate - per handhole	\$286.94
c. Large - per handhole	\$533.21

2) Pad Mounted secondary Junction Box -- per box	\$3226.71
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- 3) Pad Mounted secondary Junction Cabinet, used when electrical loads exceed the capacity of the secondary junction box (above) or when the number of the service conductors exceed the capacity of the pad mounted transformer. This charge is only applicable if the majority of the customer's service conductor diameter is less than 500 MCM.

Per cabinet (includes connecting up to 12 sets of conductor)	\$11,704.68
Tapping service conductors (if more than 12 sets) -- per set	\$ 88.00

(Continued on Sheet No. 6.530)

(Continued from Sheet No. 6.520)

- e) Primary splice box including splices and cable pulling set-up.

1) Single Phase - per box	\$1,109.75
2) Two Phase - per box	\$1,660.91
3) Three Phase - per box	\$1,867.45

- f) Additional installation charge for underground primary laterals including trench and cable-in-conduit which exceed the limits set in 13.2.12 a).

1) Single Phase - per foot	\$ 0.98
2) Two Phase - per foot	\$ 3.02
3) Three Phase - per foot	\$ 1.81

- g) Additional installation charge for underground primary laterals including trench and cable-in-conduit extended beyond the Company designated point of delivery to a remote point of delivery.

1) Single Phase - per foot	\$ 9.41
2) Two Phase - per foot	\$ 13.88
3) Three Phase - per foot	\$ 15.29

- h) The above costs are based upon arrangements that will permit serving the local underground distribution system within the commercial/industrial development from overhead feeder mains. If feeder mains within the commercial/industrial development are deemed necessary by the company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the company the average differential cost between such underground feeder mains within the commercial/industrial development and equivalent overhead feeder mains, as follows:

	Applicant's Contribution
Cost per foot of feeder trench within the commercial/industrial development (excluding switches)	\$ 10.09
Cost per above ground padmounted switch package	\$25,716.84

- i) The Company will provide one standby/assistance appointment at no additional charge to the Applicant adding new or additional load to assist with installation of the Applicant's conductors and conduit(s) into a padmounted transformer, pedestal or vault (not to exceed four hours in duration) during normal hours of operation. Additional appointments will be provided upon request, at the Applicant's expense.

(Continued on Sheet 6.540)

(Continued from Sheet No. 6.530)

13.2.13 Contribution Adjustments

- | | | |
|----|---|--|
| a) | Credits will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant provides trenching and backfilling for the Company's facilities. | Credit to the
Applicant's
Contribution |
| | 1) Credit per foot of primary trench | \$ 4.07 |
| | 2) Credit per foot of secondary trench | \$ 3.23 |
| b) | Credits will be allowed to the Applicant's contribution in section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided conduit per Company instructions. | |
| | 1) Credit per foot of 2" conduit | \$ 0.70 |
| | 2) Credit per foot of larger than 2" conduit | \$ 0.98 |
| c) | Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs a Company-provided handhole per Company instructions, | |
| | 1) Credit per large handhole/primary splice box | \$ 272.05 |
| | 2) Credit per small handhole | \$ 71.52 |
| d) | Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs a Company-provided concrete pad for a pad-mounted transformer or pad-mounted capacitor bank per Company instructions, | |
| | Credit per pad | \$ 70.12 |
| e) | Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided concrete pad for a pad-mounted feeder switch chamber per Company instructions, | |
| | Credit per pad | \$ 660.48 |
| f) | Credit will be allowed to the Applicant's contribution in Section 13.2.12. where, by mutual agreement, the Applicant installs Company-provided concrete pad for a feeder splice box per Company instructions, | |
| | Credit per splice box | \$ 776.87 |

APPENDIX 2
UCD

Appendix No.2
FPL
2019 UCD Tariff
Explanation of Proposed Revisions

This appendix is to summarize proposed revisions to Sections 11 and 13 of FPL's General Rules and Regulations for Electric Service. The basis for FPL's proposed tariff changes for underground commercial installations can be found in Appendix No. 3.

The following modifications have been made to these sections:

- 1) Revised sheet 6.530 to clarify that the cost per switch package is for "above ground padmounted" switch cabinets.

APPENDIX 3
UCD

2019 UCD Tariff Basis Design Criteria and Assumptions

I. General

Voltage – 13.2 kV

Overhead Distribution – wood poles

Underground Distribution – Cable-in-Conduit with aluminum conductor XPE-J insulated cables in direct buried conduit with above-grade appurtenances.

II. Overhead Design – Modified Vertical Framing

A. Primary lateral, transformer, and service

	1 Phase	2 Phase	3 Phase (150 KVA)	3 Phase (300 KVA)
Primary Length ⁽¹⁾	150 feet / 300 feet	150 feet / 300 feet	150 feet / 300 feet	150 feet / 300 feet
Primary Conductors	2#1/0 AAAC	3#1/0 AAAC	4#1/0 AAAC	4#1/0 AAAC
Primary Poles	1-40/3	1-40/3	1-45/2	1-45 III H
Service Length	50 feet	50 feet	50 feet	50 feet
Service Conductors	#3/0A TPX	336A QPX	2-336A QPX	2-556A QPX
Transformer	50 KVA	50 & 50 KVA	3-50KVA	3-100 KVA
Voltage	120/240V	120/240V	120/208V	120/208V
Manhours ⁽¹⁾	19 / 24	29 / 36	39 / 49	42 / 48

Note ⁽¹⁾: 150 feet when comparing to UG Radial, 300 feet when comparing to UG Loop

B. Secondary/Service Laterals

	Small 1 Phase	Large 1 Phase	Small 3 Phase	Large 3 Phase
Length	50 feet	50 feet	50 feet	50 feet
Conductor	#1/0A TPX	556A QPX	#1/0A QPX	556A QPX
Manhours	1	2	1	2

C. Handholes and Pad Mounted Secondary Junction Box

No Overhead used

D. Primary Splice Box

No Overhead Used

E. Additional Charge for Underground Primary Lateral Exceeding Basic Length

Single Phase	1,000 feet 2#1/0 AAAC, 4 - 40'3 Poles
Two Phase	1,000 feet 3#1/0 AAAC, 4 - 40'3 Poles
Three Phase	1,000 feet 4#1/0 AAAC, 4 - 40'2 Poles

F. Additional Charge for Underground Primary Lateral to a Remote Point of Delivery

No Overhead Used

III. Underground Design Criteria

A.1 Primary lateral, riser, padmounted transformer and trench with Cable in Conduit

	1 Phase	2 Phase	3 Phase	3 Phase
Trench length (radial)	150 feet	150 feet	150 feet	150 feet
Trench length (loop)	300 feet	300 feet	300 feet	300 feet
Trench cover	36 inches	36 inches	36 inches	36 inches
Conductor size	#1/0A 25kV XPE	2#1/0A 25kV XPE	3#1/0A 25kV XPE	3#1/0A 25kV XPE
Conduit Size	1-2 inch	2-2 inch	1-5 inch	1-5 inch
Riser Length	30 feet	30 feet	30 feet	30 feet
Riser Size	2 inch U-guard	5 inch U-guard	5 inch U-guard	5 inch U-guard
Transformer Size	50 KVA	50 & 50 KVA	150 KVA	300 KVA
Voltage	120/240 V	120/240 V	120/208 V	120/208 V
Manhours (radial)	19	26	26	26
Manhours (loop)	26	37	34	36

A.2 Primary lateral, UG source, padmounted transformer and trench with Cable in Conduit

	1 Phase	2 Phase	3 Phase	3 Phase
Trench length (radial)	150 feet	150 feet	150 feet	150 feet
Trench length (loop)	300 feet	300 feet	300 feet	300 feet
Trench cover	36 inches	36 inches	36 inches	36 inches
Conductor size	#1/0A 25kV XPE	2#1/0A 25kV XPE	3#1/0A 25kV XPE	3#1/0A 25kV XPE
Conduit Size	1-2 inch	2-2 inch	1-5 inch	1-5 inch
Transformer Size	50 KVA	50 & 50 KVA	150 KVA	300 KVA
Voltage	120/240 V	120/240 V	120/208 V	120/208 V
Manhours (radial)	15	22	17	17
Manhours (loop)	21	30	26	26

B. Secondary/Service lateral and riser with multiple connectors.

	Small 1 Phase	Large 1 Phase	Small 3 Phase	Large 3 Phase
Trench length	10 feet	10 feet	10 feet	10 feet
Trench cover	24 inch	24 inch	24 inch	24 inch
Conductor Size	#4/0A TPX	3-750A	#4/0A QPX	4-750A
Conduit size	2 inch	5 inch	5 inch	5 inch
Riser length	30 feet	30 feet	30 feet	30 feet
Riser size	2 inch U-guard	5 inch U-guard	5 inch U-guard	5 inch U-guard
Manhours	3.9	5.0	4.6	6.4

C. Handholes and Padmounted Secondary Junction Box and Cabinet

- Small handhole - 24 inch handhole
- Intermediate Handhole - 30 inch handhole
- Large Handhole - 48 inch handhole
- Secondary Junction box - Replacement cabinet and Connectors per I - 74.1
- Sec. Junction Cabinet - Three-Phase Secondary Cabinet and Connectors (22-Port) per I - 75.0.0

D. Primary Splice Box

- Single Phase - 48" handhole with one molded splice and one pull set-up and basket
- Two Phase - 48" handhole with two molded splices and two pull set-ups and baskets
- Three Phase - 48" handhole with three molded splices and one pull set-up and basket

E. Additional Charge for Underground Primary Lateral Exceeding Basic Length

- Single Phase – 1,000 feet 1#1/0A 25KV XPE, 1-2 inch pvc, 36 inch trench, pull labor
- Two Phase - 1000 feet 2#1/0A 25kv XPE, 2-2 inch PVC, 36 inch trench, pull labor
- Three Phase – 1,000 feet 3#1/0A 25KV XPE, 1-5 inch pvc, 36 inch trench, pull labor

F. Additional charge for Underground Primary Lateral to a Remote Point of Delivery

- Single Phase - 1000 feet 1#1/0A 25kv XPE, 1-2 inch PVC, 36 inch trench, pull labor
- Two Phase - 1000 feet 2#1/0A 25kv XPE, 2-2 inch PVC, 36 inch trench, pull labor
- Three Phase -1000 feet 3#1/0A 25kv XPE, 1-5 inch PVC, 36 inch trench, pull labor

FPL

Basis for Underground Commercial Distribution Differential

New Underground Commercial Development with Overhead Feeder Mains. The average differential costs for Underground Commercial Distribution stated in the FPL rules and Regulations were derived from cost estimates of underground commercial facilities and their equivalent overhead designs. These estimates employed the standard Company design and estimating practices and the system-wide unit costs, which were in use at the end of 2018. Design criteria include the following:

Primary Voltage	13,200/7,620 V
Phases, Secondary Voltage	Single Phase, 120/240 V Three phase, 120/240 V Three phase, 120/208 V Three phase, 277/480 V
Underground Design	All cable-in-conduit
Overhead Design	Wood Poles *, Extreme Windload (145 MPH)

* Concrete pole used for 300 KVA OH TX Bank

APPENDIX 4
UCD

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****SINGLE PHASE RADIAL PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$3,989.36	\$2,492.56	(\$1,496.80)
MATERIAL	\$6,618.45	\$3,684.13	(\$2,934.32)
TOTAL	\$10,607.81	\$6,176.69	(\$4,431.12)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$88.47	\$199.83	\$288.30
Primary	\$3,441.79	\$724.46	\$4,166.25
Secondary	\$33.62	\$357.48	\$391.10
Poles	\$499.29	\$1,278.14	\$1,777.43
Transformers	\$1,118.64	\$745.28	\$1,863.92
Sub-Total	\$5,181.81	\$3,305.19	\$8,487.00
Stores Handling(2)	\$301.58	\$0.00	\$301.58
SubTotal	\$5,483.39	\$3,305.19	\$8,788.58
Engineering(4)	\$1,135.06	\$684.17	\$1,819.23
TOTAL	\$6,618.45	\$3,989.36	\$10,607.81

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, single phase for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE RADIAL PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$722.04	\$1,051.20	\$1,773.24
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$2,162.39	\$403.89	\$2,566.28
Trenching	\$0.00	\$610.00	\$610.00
Sub-Total	\$2,884.43	\$2,065.09	\$4,949.52
Stores Handling(2)	\$167.87	\$0.00	\$167.87
SubTotal	\$3,052.30	\$2,065.09	\$5,117.39
Engineering(4)	\$631.83	\$427.47	\$1,059.30
TOTAL	\$3,684.13	\$2,492.56	\$6,176.69

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, single phase, for design criteria and assumptions

OVERHEAD VS. UNDERGROUND
SUMMARY SHEET
COST PER TRANSFORMER BANK -
TWO PHASE RADIAL PAD MOUNTED TRANSFORMER
INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH
WITH CABLE-IN-CONDUIT
2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$6,118.72	\$4,737.75	(\$1,380.97)
MATERIAL	\$12,770.11	\$6,573.65	(\$6,196.46)
TOTAL	\$18,888.83	\$11,311.40	(\$7,577.43)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$195.98	\$423.04	\$619.02
Primary	\$6,723.05	\$1,442.52	\$8,165.57
Secondary	\$32.83	\$355.90	\$388.73
Poles	\$848.46	\$1,438.35	\$2,286.81
Transformers	\$2,197.83	\$1,409.55	\$3,607.38
Sub-Total	\$9,998.15	\$5,069.36	\$15,067.51
Stores Handling(2)	\$581.89	\$0.00	\$581.89
SubTotal	\$10,580.04	\$5,069.36	\$15,649.40
Engineering(4)	\$2,190.07	\$1,049.36	\$3,239.43
TOTAL	\$12,770.11	\$6,118.72	\$18,888.83

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, two phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE RADIAL PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,446.54	\$2,173.86	\$3,620.40
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$3,700.19	\$1,141.37	\$4,841.56
Trenching	\$0.00	\$610.00	\$610.00
Sub-Total	\$5,146.73	\$3,925.23	\$9,071.96
Stores Handling(2)	\$299.54	\$0.00	\$299.54
SubTotal	\$5,446.27	\$3,925.23	\$9,371.50
Engineering(4)	\$1,127.38	\$812.52	\$1,939.90
TOTAL	\$6,573.65	\$4,737.75	\$11,311.40

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, two phase for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK - 300 KVA****THREE PHASE RADIAL PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$10,613.60	\$4,615.04	(\$5,998.56)
MATERIAL	\$24,908.56	\$15,040.50	(\$9,868.06)
TOTAL	\$35,522.16	\$19,655.54	(\$15,866.62)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE (300 KVA)****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$638.79	\$997.31	\$1,636.10
Primary	\$10,275.60	\$2,407.08	\$12,682.68
Secondary	\$33.45	\$395.92	\$429.37
Poles	\$1,861.85	\$2,859.81	\$4,721.66
Transformers	\$6,692.06	\$2,133.25	\$8,825.31
Sub-Total	\$19,501.75	\$8,793.37	\$28,295.12
Stores Handling(2)	\$1,135.00	\$0.00	\$1,135.00
SubTotal	\$20,636.75	\$8,793.37	\$29,430.12
Engineering(4)	\$4,271.81	\$1,820.23	\$6,092.04
TOTAL	\$24,908.56	\$10,613.60	\$35,522.16

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, three phase (300 kva) for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE RADIAL PAD MOUNTED TRANSFORMER 300 KVA****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,831.53	\$1,894.29	\$3,725.82
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$9,944.18	\$1,319.27	\$11,263.45
Trenching	\$0.00	\$610.00	\$610.00
Sub-Total	\$11,775.71	\$3,823.56	\$15,599.27
Stores Handling(2)	\$685.35	\$0.00	\$685.35
SubTotal	\$12,461.06	\$3,823.56	\$16,284.62
Engineering(4)	\$2,579.44	\$791.48	\$3,370.92
TOTAL	\$15,040.50	\$4,615.04	\$19,655.54

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (300 KVA) for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK - 150 KVA****THREE PHASE RADIAL PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$9,208.61	\$4,775.37	(\$4,433.24)
MATERIAL	\$19,884.55	\$11,446.83	(\$8,437.72)
TOTAL	\$29,093.16	\$16,222.20	(\$12,870.96)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE (150 KVA)****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$626.36	\$1,137.73	\$1,764.09
Primary	\$10,332.09	\$2,431.81	\$12,763.90
Secondary	\$33.64	\$399.98	\$433.62
Poles	\$1,005.93	\$1,562.57	\$2,568.50
Transformers	\$3,570.27	\$2,097.25	\$5,667.52
Sub-Total	\$15,568.29	\$7,629.34	\$23,197.63
Stores Handling(2)	\$906.07	\$0.00	\$906.07
SubTotal	\$16,474.36	\$7,629.34	\$24,103.70
Engineering(4)	\$3,410.19	\$1,579.27	\$4,989.46
TOTAL	\$19,884.55	\$9,208.61	\$29,093.16

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE RADIAL PAD MOUNTED TRANSFORMER 150 KVA****INCLUDING RISER AND 150' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,857.24	\$2,027.13	\$3,884.37
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$7,104.87	\$1,319.27	\$8,424.14
Trenching	\$0.00	\$610.00	\$610.00
Sub-Total	\$8,962.11	\$3,956.40	\$12,918.51
Stores Handling(2)	\$521.59	\$0.00	\$521.59
SubTotal	\$9,483.70	\$3,956.40	\$13,440.10
Engineering(4)	\$1,963.13	\$818.97	\$2,782.10
TOTAL	\$11,446.83	\$4,775.37	\$16,222.20

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****SINGLE PHASE LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$4,991.04	\$4,529.48	(\$461.56)
MATERIAL	\$7,163.09	\$4,054.88	(\$3,108.21)
TOTAL	\$12,154.13	\$8,584.36	(\$3,569.77)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$88.47	\$199.83	\$288.30
Primary	\$3,542.01	\$900.19	\$4,442.20
Secondary	\$68.52	\$557.99	\$626.51
Poles	\$767.52	\$1,684.98	\$2,452.50
Transformers	\$1,141.70	\$792.09	\$1,933.79
Sub-Total	\$5,608.22	\$4,135.08	\$9,743.30
Stores Handling(2)	\$326.40	\$0.00	\$326.40
SubTotal	\$5,934.62	\$4,135.08	\$10,069.70
Engineering(4)	\$1,228.47	\$855.96	\$2,084.43
TOTAL	\$7,163.09	\$4,991.04	\$12,154.13

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

5 - See Appendix 3, page 1, IIA, Single Phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,124.25	\$1,635.22	\$2,759.47
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$2,050.45	\$897.46	\$2,947.91
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$3,174.70	\$3,752.68	\$6,927.38
Stores Handling(2)	\$184.77	\$0.00	\$184.77
SubTotal	\$3,359.47	\$3,752.68	\$7,112.15
Engineering(4)	\$695.41	\$776.80	\$1,472.21
TOTAL	\$4,054.88	\$4,529.48	\$8,584.36

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, single phase (loop), for design criteria and assumptions

OVERHEAD VS. UNDERGROUND
SUMMARY SHEET
COST PER TRANSFORMER BANK -
TWO PHASE LOOP PAD MOUNTED TRANSFORMER
INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH
WITH CABLE-IN-CONDUIT
2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$7,528.89	\$6,718.90	(\$809.99)
MATERIAL	\$13,475.88	\$7,847.15	(\$5,628.73)
TOTAL	\$21,004.77	\$14,566.05	(\$6,438.72)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$195.98	\$423.04	\$619.02
Primary	\$7,039.05	\$1,903.39	\$8,942.44
Secondary	\$68.09	\$589.92	\$658.01
Poles	\$1,014.07	\$1,857.80	\$2,871.87
Transformers	\$2,233.53	\$1,463.54	\$3,697.07
Sub-Total	\$10,550.72	\$6,237.69	\$16,788.41
Stores Handling(2)	\$614.05	\$0.00	\$614.05
SubTotal	\$11,164.77	\$6,237.69	\$17,402.46
Engineering(4)	\$2,311.11	\$1,291.20	\$3,602.31
TOTAL	\$13,475.88	\$7,528.89	\$21,004.77

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, two phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,227.88	\$3,152.62	\$5,380.50
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$3,915.92	\$1,193.99	\$5,109.91
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$6,143.80	\$5,566.61	\$11,710.41
Stores Handling(2)	\$357.57	\$0.00	\$357.57
SubTotal	\$6,501.37	\$5,566.61	\$12,067.98
Engineering(4)	\$1,345.78	\$1,152.29	\$2,498.07
TOTAL	\$7,847.15	\$6,718.90	\$14,566.05

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, two phase (loop)for design criteria and assumptions

OVERHEAD VS. UNDERGROUNDSUMMARY SHEETCOST PER TRANSFORMER BANK -THREE PHASE 150 KVA LOOP PAD MOUNTED TRANSFORMERINCLUDING RISER AND 300' PRIMARY LATERAL TRENCHWITH CABLE-IN-CONDUIT2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$11,605.28	\$6,394.12	(\$5,211.16)
MATERIAL	\$20,874.27	\$14,857.55	(\$6,016.72)
TOTAL	\$32,479.55	\$21,251.67	(\$11,227.88)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK

THREE PHASE 300' PRIMARY LATERAL POLE LINE

INCLUDING TRANSFORMER AND SERVICE (150 KVA)

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$626.36	\$1,137.73	\$1,764.09
Primary	\$10,547.29	\$3,013.79	\$13,561.08
Secondary	\$68.01	\$622.70	\$690.71
Poles	\$1,355.02	\$2,104.44	\$3,459.46
Transformers	\$3,746.49	\$2,736.32	\$6,482.81
Sub-Total	\$16,343.17	\$9,614.98	\$25,958.15
Stores Handling(2)	\$951.17	\$0.00	\$951.17
SubTotal	\$17,294.34	\$9,614.98	\$26,909.32
Engineering(4)	\$3,579.93	\$1,990.30	\$5,570.23
TOTAL	\$20,874.27	\$11,605.28	\$32,479.55

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 150 KVA LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,971.21	\$2,560.04	\$5,531.25
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$8,661.27	\$1,517.49	\$10,178.76
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$11,632.48	\$5,297.53	\$16,930.01
Stores Handling(2)	\$677.01	\$0.00	\$677.01
SubTotal	\$12,309.49	\$5,297.53	\$17,607.02
Engineering(4)	\$2,548.06	\$1,096.59	\$3,644.65
TOTAL	\$14,857.55	\$6,394.12	\$21,251.67

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (300kva-loop) for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****THREE PHASE 300 KVA LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$12,304.07	\$6,394.12	(\$5,909.95)
MATERIAL	\$25,685.00	\$17,048.01	(\$8,636.99)
TOTAL	\$37,989.07	\$23,442.13	(\$14,546.94)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER (300 TOTAL KVA) AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$638.79	\$997.31	\$1,636.10
Primary	\$10,576.37	\$3,013.79	\$13,590.16
Secondary	\$68.20	\$622.70	\$690.90
Poles	\$2,198.07	\$3,426.88	\$5,624.95
Transformers	\$6,628.22	\$2,133.25	\$8,761.47
Sub-Total	\$20,109.65	\$10,193.93	\$30,303.58
Stores Handling(2)	\$1,170.38	\$0.00	\$1,170.38
SubTotal	\$21,280.03	\$10,193.93	\$31,473.96
Engineering(4)	\$4,404.97	\$2,110.14	\$6,515.11
TOTAL	\$25,685.00	\$12,304.07	\$37,989.07

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, 3 phase (300 KVA) for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 300 KVA LOOP PAD MOUNTED TRANSFORMER****INCLUDING RISER AND 300' PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,971.21	\$2,560.04	\$5,531.25
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$10,376.25	\$1,517.49	\$11,893.74
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$13,347.46	\$5,297.53	\$18,644.99
Stores Handling(2)	\$776.82	\$0.00	\$776.82
SubTotal	\$14,124.28	\$5,297.53	\$19,421.81
Engineering(4)	\$2,923.73	\$1,096.59	\$4,020.32
TOTAL	\$17,048.01	\$6,394.12	\$23,442.13

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (300kva-loop) for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****SINGLE PHASE LOOP PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$4,991.04	\$3,446.42	(\$1,544.62)
MATERIAL	\$7,163.09	\$3,697.67	(\$3,465.42)
TOTAL	\$12,154.13	\$7,144.09	(\$5,010.04)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$88.47	\$199.83	\$288.30
Primary	\$3,542.01	\$900.19	\$4,442.20
Secondary	\$68.52	\$557.99	\$626.51
Poles	\$767.52	\$1,684.98	\$2,452.50
Transformers	\$1,141.70	\$792.09	\$1,933.79
Sub-Total	\$5,608.22	\$4,135.08	\$9,743.30
Stores Handling(2)	\$326.40	\$0.00	\$326.40
SubTotal	\$5,934.62	\$4,135.08	\$10,069.70
Engineering(4)	\$1,228.47	\$855.96	\$2,084.43
TOTAL	\$7,163.09	\$4,991.04	\$12,154.13

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

5 - See Appendix 3, page 1, IIA, Single Phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK
SINGLE PHASE LOOP PAD MOUNTED TRANSFORMER
FROM EXISTING UNDERGROUND TERMINATION POINT
INCLUDING 300' PRIMARY LATERAL AND TRENCH WITH CABLE-IN-CONDUIT

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$999.94	\$989.92	\$1,989.86
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$1,895.09	\$645.44	\$2,540.53
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$2,895.03	\$2,855.36	\$5,750.39
Stores Handling(2)	\$168.49	\$0.00	\$168.49
SubTotal	\$3,063.52	\$2,855.36	\$5,918.88
Engineering(4)	\$634.15	\$591.06	\$1,225.21
TOTAL	\$3,697.67	\$3,446.42	\$7,144.09

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, single phase (loop), for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****SINGLE PHASE RADIAL PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$3,989.36	\$2,498.37	(\$1,490.99)
MATERIAL	\$6,618.45	\$3,271.97	(\$3,346.48)
TOTAL	\$10,607.81	\$5,770.34	(\$4,837.47)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**SINGLE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$88.47	\$199.83	\$288.30
Primary	\$3,441.79	\$724.46	\$4,166.25
Secondary	\$33.62	\$357.48	\$391.10
Poles	\$499.29	\$1,278.14	\$1,777.43
Transformers	\$1,118.64	\$745.28	\$1,863.92
Sub-Total	\$5,181.81	\$3,305.19	\$8,487.00
Stores Handling(2)	\$301.58	\$0.00	\$301.58
SubTotal	\$5,483.39	\$3,305.19	\$8,788.58
Engineering(4)	\$1,135.06	\$684.17	\$1,819.23
TOTAL	\$6,618.45	\$3,989.36	\$10,607.81

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA single phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK
SINGLE PHASE RADIAL PAD MOUNTED TRANSFORMER
FROM EXISTING UNDERGROUND TERMINATION POINT
INCLUDING 150' PRIMARY LATERAL AND TRENCH WITH CABLE-IN-CONDUIT

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$659.55	\$234.25	\$893.80
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$1,902.19	\$615.65	\$2,517.84
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$2,561.74	\$2,069.90	\$4,631.64
Stores Handling(2)	\$149.09	\$0.00	\$149.09
SubTotal	\$2,710.83	\$2,069.90	\$4,780.73
Engineering(4)	\$561.14	\$428.47	\$989.61
TOTAL	\$3,271.97	\$2,498.37	\$5,770.34

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, single phase (radial), for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****TWO PHASE LOOP PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$6,804.69	\$5,283.01	(\$1,521.68)
MATERIAL	\$14,886.21	\$7,238.20	(\$7,648.01)
TOTAL	\$21,690.90	\$12,521.21	(\$9,169.69)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$195.98	\$423.04	\$619.02
Primary	\$7,039.05	\$1,903.39	\$8,942.44
Secondary	\$68.09	\$589.92	\$658.01
Poles	\$2,424.40	\$1,133.60	\$3,558.00
Transformers	\$2,233.53	\$1,463.54	\$3,697.07
Sub-Total	\$11,961.05	\$5,513.49	\$17,474.54
Stores Handling(2)	\$614.05	\$0.00	\$614.05
SubTotal	\$12,575.10	\$5,513.49	\$18,088.59
Engineering(4)	\$2,311.11	\$1,291.20	\$3,602.31
TOTAL	\$14,886.21	\$6,804.69	\$21,690.90

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, two phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE LOOP PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,091.79	\$2,460.09	\$4,551.88
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$3,575.24	\$696.89	\$4,272.13
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$5,667.03	\$4,376.98	\$10,044.01
Stores Handling(2)	\$329.82	\$0.00	\$329.82
SubTotal	\$5,996.85	\$4,376.98	\$10,373.83
Engineering(4)	\$1,241.35	\$906.03	\$2,147.38
TOTAL	\$7,238.20	\$5,283.01	\$12,521.21

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: Appendix 3, page 2, IIIA, two phase (loop), for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****TWO PHASE RADIAL PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$6,118.72	\$3,928.69	(\$2,190.03)
MATERIAL	\$12,770.11	\$5,944.28	(\$6,825.83)
TOTAL	\$18,888.83	\$9,872.97	(\$9,015.86)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**TWO PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$195.98	\$423.04	\$619.02
Primary	\$6,723.05	\$1,442.52	\$8,165.57
Secondary	\$32.83	\$355.90	\$388.73
Poles	\$848.46	\$1,438.35	\$2,286.81
Transformers	\$2,197.83	\$1,409.55	\$3,607.38
Sub-Total	\$9,998.15	\$5,069.36	\$15,067.51
Stores Handling(2)	\$581.89	\$0.00	\$581.89
SubTotal	\$10,580.04	\$5,069.36	\$15,649.40
Engineering(4)	\$2,190.07	\$1,049.36	\$3,239.43
TOTAL	\$12,770.11	\$6,118.72	\$18,888.83

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, two phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK
TWO PHASE RADIAL PAD MOUNTED TRANSFORMER
FROM EXISTING UNDERGROUND TERMINATION POINT
INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,275.30	\$1,296.03	\$2,571.33
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$3,378.68	\$738.89	\$4,117.57
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$4,653.98	\$3,254.92	\$7,908.90
Stores Handling(2)	\$270.86	\$0.00	\$270.86
SubTotal	\$4,924.84	\$3,254.92	\$8,179.76
Engineering(4)	\$1,019.44	\$673.77	\$1,693.21
TOTAL	\$5,944.28	\$3,928.69	\$9,872.97

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: Appendix 3, page 2, IIIA, two phase (radial), for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****THREE PHASE 150 KVA LOOP PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$11,605.28	\$4,355.56	(\$7,249.72)
MATERIAL	\$20,874.27	\$14,156.35	(\$6,717.92)
TOTAL	\$32,479.55	\$18,511.91	(\$13,967.64)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK

THREE PHASE 300' PRIMARY LATERAL POLE LINE

INCLUDING TRANSFORMER AND SERVICE (150 KVA)

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$626.36	\$1,137.73	\$1,764.09
Primary	\$10,547.29	\$3,013.79	\$13,561.08
Secondary	\$68.01	\$622.70	\$690.71
Poles	\$1,355.02	\$2,104.44	\$3,459.46
Transformers	\$3,746.49	\$2,736.32	\$6,482.81
Sub-Total	\$16,343.17	\$9,614.98	\$25,958.15
Stores Handling(2)	\$951.17	\$0.00	\$951.17
SubTotal	\$17,294.34	\$9,614.98	\$26,909.32
Engineering(4)	\$3,579.93	\$1,990.30	\$5,570.23
TOTAL	\$20,874.27	\$11,605.28	\$32,479.55

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK
THREE PHASE LOOP PAD MOUNTED TRANSFORMER (150 KVA)
FROM EXISTING UNDERGROUND TERMINATION POINT
INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,921.92	\$1,677.62	\$4,599.54
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$8,161.56	\$710.96	\$8,872.52
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$11,083.48	\$3,608.58	\$14,692.06
Stores Handling(2)	\$645.06	\$0.00	\$645.06
SubTotal	\$11,728.54	\$3,608.58	\$15,337.12
Engineering(4)	\$2,427.81	\$746.98	\$3,174.79
TOTAL	\$14,156.35	\$4,355.56	\$18,511.91

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (150kva-loop) for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****THREE PHASE 300 KVA LOOP PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$12,304.07	\$4,355.56	(\$7,948.51)
MATERIAL	\$25,685.00	\$16,346.80	(\$9,338.20)
TOTAL	\$37,989.07	\$20,702.36	(\$17,286.71)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 300' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER (300 TOTAL KVA) AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$638.79	\$997.31	\$1,636.10
Primary	\$10,576.37	\$3,013.79	\$13,590.16
Secondary	\$68.20	\$622.70	\$690.90
Poles	\$2,198.07	\$3,426.88	\$5,624.95
Transformers	\$6,628.22	\$2,133.25	\$8,761.47
Sub-Total	\$20,109.65	\$10,193.93	\$30,303.58
Stores Handling(2)	\$1,170.38	\$0.00	\$1,170.38
SubTotal	\$21,280.03	\$10,193.93	\$31,473.96
Engineering(4)	\$4,404.97	\$2,110.14	\$6,515.11
TOTAL	\$25,685.00	\$12,304.07	\$37,989.07

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, 3 phase (300 KVA) for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK
THREE PHASE LOOP PAD MOUNTED TRANSFORMER (300 KVA)
FROM EXISTING UNDERGROUND TERMINATION POINT
INCLUDING 300' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT

2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,921.92	\$1,677.62	\$4,599.54
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$9,876.54	\$710.96	\$10,587.50
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$12,798.46	\$3,608.58	\$16,407.04
Stores Handling(2)	\$744.87	\$0.00	\$744.87
SubTotal	\$13,543.33	\$3,608.58	\$17,151.91
Engineering(4)	\$2,803.47	\$746.98	\$3,550.45
TOTAL	\$16,346.80	\$4,355.56	\$20,702.36

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (300kva-loop) for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****THREE PHASE 150 KVA RADIAL PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$9,208.61	\$3,001.30	(\$6,207.31)
MATERIAL	\$19,884.55	\$10,794.64	(\$9,089.91)
TOTAL	\$29,093.16	\$13,795.94	(\$15,297.22)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER (150 TOTAL KVA) AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$626.36	\$1,137.73	\$1,764.09
Primary	\$10,332.09	\$2,431.81	\$12,763.90
Secondary	\$33.64	\$399.98	\$433.62
Poles	\$1,005.93	\$1,562.57	\$2,568.50
Transformers	\$3,570.27	\$2,097.25	\$5,667.52
Sub-Total	\$15,568.29	\$7,629.34	\$23,197.63
Stores Handling(2)	\$906.07	\$0.00	\$906.07
SubTotal	\$16,474.36	\$7,629.34	\$24,103.70
Engineering(4)	\$3,410.19	\$1,579.27	\$4,989.46
TOTAL	\$19,884.55	\$9,208.61	\$29,093.16

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, three phase (150 KVA), for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE RADIAL PAD MOUNTED TRANSFORMER (150 KVA)****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,786.42	\$608.00	\$2,394.42
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$6,665.06	\$658.58	\$7,323.64
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$8,451.48	\$2,486.58	\$10,938.06
Stores Handling(2)	\$491.88	\$0.00	\$491.88
SubTotal	\$8,943.36	\$2,486.58	\$11,429.94
Engineering(4)	\$1,851.28	\$514.72	\$2,366.00
TOTAL	\$10,794.64	\$3,001.30	\$13,795.94

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIIA, three phase (150kva-radial) for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER TRANSFORMER BANK -****THREE PHASE 300 KVA RADIAL PAD MOUNTED TRANSFORMER****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$10,613.60	\$3,365.38	(\$7,248.22)
MATERIAL	\$24,908.56	\$15,082.91	(\$9,825.65)
TOTAL	\$35,522.16	\$18,448.29	(\$17,073.87)

OVERHEAD MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE 150' PRIMARY LATERAL POLE LINE****INCLUDING TRANSFORMER (300 TOTAL KVA) AND SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$638.79	\$997.31	\$1,636.10
Primary	\$10,275.60	\$2,407.08	\$12,682.68
Secondary	\$33.45	\$395.92	\$429.37
Poles	\$1,861.85	\$2,859.81	\$4,721.66
Transformers	\$6,692.06	\$2,133.25	\$8,825.31
Sub-Total	\$19,501.75	\$8,793.37	\$28,295.12
Stores Handling(2)	\$1,135.00	\$0.00	\$1,135.00
SubTotal	\$20,636.75	\$8,793.37	\$29,430.12
Engineering(4)	\$4,271.81	\$1,820.23	\$6,092.04
TOTAL	\$24,908.56	\$10,613.60	\$35,522.16

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIA, three phase (300 KVA), for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER TRANSFORMER BANK**THREE PHASE RADIAL PAD MOUNTED TRANSFORMER (300 KVA)****FROM EXISTING UNDERGROUND TERMINATION POINT****INCLUDING 150' PRIMARY LATERAL TRENCH WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,915.92	\$863.50	\$2,779.42
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$9,893.00	\$704.72	\$10,597.72
Trenching	\$0.00	\$1,220.00	\$1,220.00
Sub-Total	\$11,808.92	\$2,788.22	\$14,597.14
Stores Handling(2)	\$687.28	\$0.00	\$687.28
SubTotal	\$12,496.20	\$2,788.22	\$15,284.42
Engineering(4)	\$2,586.71	\$577.16	\$3,163.87
TOTAL	\$15,082.91	\$3,365.38	\$18,448.29

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIA, three phase (300kva-radial) for design criteria and assumptions. Riser length and riser size are not applicable.

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER RISER -****SMALL SINGLE PHASE RISER****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$241.19	\$656.19	\$415.00
MATERIAL	\$84.80	\$271.13	\$186.33
TOTAL	\$325.99	\$927.32	\$601.33

OVERHEAD MATERIAL AND LABOR COST PER SERVICE**SINGLE PHASE SMALL SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$66.40	\$199.83	\$266.23
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$0.00	\$0.00	\$0.00
Poles	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$66.40	\$199.83	\$266.23
Stores Handling(2)	\$3.86	\$0.00	\$3.86
SubTotal	\$70.26	\$199.83	\$270.09
Engineering(4)	\$14.54	\$41.36	\$55.90
TOTAL	\$84.80	\$241.19	\$325.99

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, B, small single phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**SMALL SINGLE PHASE RISER****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$212.28	\$543.65	\$755.93
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$212.28	\$543.65	\$755.93
Stores Handling(2)	\$12.35	\$0.00	\$12.35
SubTotal	\$224.63	\$543.65	\$768.28
Engineering(4)	\$46.50	\$112.54	\$159.04
TOTAL	\$271.13	\$656.19	\$927.32

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIIB, small single phase, for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER RISER -****LARGE SINGLE PHASE RISER****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$510.61	\$913.98	\$403.37
MATERIAL	\$381.28	\$1,063.40	\$682.12
TOTAL	\$891.89	\$1,977.38	\$1,085.49

OVERHEAD MATERIAL AND LABOR COST PER SERVICE**SINGLE PHASE LARGE SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$298.52	\$423.04	\$721.56
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$0.00	\$0.00	\$0.00
Poles	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$298.52	\$423.04	\$721.56
Stores Handling(2)	\$17.37	\$0.00	\$17.37
SubTotal	\$315.89	\$423.04	\$738.93
Engineering(4)	\$65.39	\$87.57	\$152.96
TOTAL	\$381.28	\$510.61	\$891.89

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIB, large single phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**LARGE SINGLE PHASE RISER****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$832.57	\$757.23	\$1,589.80
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$832.57	\$757.23	\$1,589.80
Stores Handling(2)	\$48.46	\$0.00	\$48.46
SubTotal	\$881.03	\$757.23	\$1,638.26
Engineering(4)	\$182.37	\$156.75	\$339.12
TOTAL	\$1,063.40	\$913.98	\$1,977.38

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIIB, large single phase, for design criteria and assumptions

OVERHEAD VS. UNDERGROUND**SUMMARY SHEET****COST PER RISER -****SMALL THREE PHASE RISER****2019**

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$299.86	\$749.41	\$449.55
MATERIAL	\$113.43	\$548.51	\$435.08
TOTAL	\$413.29	\$1,297.92	\$884.63

OVERHEAD MATERIAL AND LABOR COST PER SERVICE**THREE PHASE SMALL SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$88.81	\$248.43	\$337.24
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$0.00	\$0.00	\$0.00
Poles	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$88.81	\$248.43	\$337.24
Stores Handling(2)	\$5.17	\$0.00	\$5.17
SubTotal	\$93.98	\$248.43	\$342.41
Engineering(4)	\$19.45	\$51.43	\$70.88
TOTAL	\$113.43	\$299.86	\$413.29

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIB, small three phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**SMALL THREE PHASE RISER****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$429.45	\$620.89	\$1,050.34
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$429.45	\$620.89	\$1,050.34
Stores Handling(2)	\$24.99	\$0.00	\$24.99
SubTotal	\$454.44	\$620.89	\$1,075.33
Engineering(4)	\$94.07	\$128.52	\$222.59
TOTAL	\$548.51	\$749.41	\$1,297.92

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIIB, small three phase, for design criteria and assumptions

OVERHEAD VS. UNDERGROUNDSUMMARY SHEETCOST PER RISER -LARGE THREE PHASE RISER2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$510.61	\$1,174.00	\$663.39
MATERIAL	\$381.28	\$1,327.29	\$946.01
TOTAL	\$891.89	\$2,501.29	\$1,609.40

OVERHEAD MATERIAL AND LABOR COST PER SERVICE**THREE PHASE LARGE SERVICE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$298.52	\$423.04	\$721.56
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$0.00	\$0.00	\$0.00
Poles	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$298.52	\$423.04	\$721.56
Stores Handling(2)	\$17.37	\$0.00	\$17.37
SubTotal	\$315.89	\$423.04	\$738.93
Engineering(4)	\$65.39	\$87.57	\$152.96
TOTAL	\$381.28	\$510.61	\$891.89

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 1, IIB, large three phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**LARGE THREE PHASE RISER****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$1,039.18	\$972.66	\$2,011.84
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$1,039.18	\$972.66	\$2,011.84
Stores Handling(2)	\$60.48	\$0.00	\$60.48
SubTotal	\$1,099.66	\$972.66	\$2,072.32
Engineering(4)	\$227.63	\$201.34	\$428.97
TOTAL	\$1,327.29	\$1,174.00	\$2,501.29

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIIB, large three phase, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**SMALL HANDHOLE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$114.59	\$71.52	\$186.11
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$114.59	\$71.52	\$186.11
Stores Handling(2)	\$6.67	\$0.00	\$6.67
SubTotal	\$121.26	\$71.52	\$192.78
Engineering(4)	\$25.10	\$14.80	\$39.90
TOTAL	\$146.36	\$86.32	\$232.68

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIC, small handhole, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**INTERMEDIATE HANDHOLE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$157.07	\$71.52	\$228.59
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$157.07	\$71.52	\$228.59
Stores Handling(2)	\$9.14	\$0.00	\$9.14
SubTotal	\$166.21	\$71.52	\$237.73
Engineering(4)	\$34.41	\$14.80	\$49.21
TOTAL	\$200.62	\$86.32	\$286.94

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIC, intermediate handhole for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**LARGE HANDHOLE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$160.39	\$272.05	\$432.44
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$160.39	\$272.05	\$432.44
Stores Handling(2)	\$9.33	\$0.00	\$9.33
SubTotal	\$169.72	\$272.05	\$441.77
Engineering(4)	\$35.13	\$56.31	\$91.44
TOTAL	\$204.85	\$328.36	\$533.21

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIC, large handhole for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER RISER**PADMOUNTED SECONDARY JUNCTION BOX****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$2,081.90	\$470.26	\$2,552.16
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$2,081.90	\$470.26	\$2,552.16
Stores Handling(2)	\$121.17	\$0.00	\$121.17
SubTotal	\$2,203.07	\$470.26	\$2,673.33
Engineering(4)	\$456.04	\$97.34	\$553.38
TOTAL	\$2,659.11	\$567.60	\$3,226.71

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix B, page 3, IIC, secondary junction box, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER CABINET**PADMOUNTED SECONDARY JUNCTION CABINET****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$0.00	\$0.00	\$0.00
Secondary	\$4,635.75	\$430.50	\$5,066.25
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$4,635.75	\$430.50	\$5,066.25
Stores Handling(2)	\$269.80	\$0.00	\$269.80
SubTotal	\$4,905.55	\$430.50	\$5,336.05
Engineering(4)	\$1,015.45	\$89.11	\$1,104.56
TOTAL	\$5,921.00	\$519.61	\$6,440.61

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix B, page 3, IIC, secondary junction cabinet, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER CABINET
PADMOUNTED SECONDARY JUNCTION CABINET
SECONDARY CONDUCTORS AND SERVICE TAPS

2019

ITEM	MATERIAL(1)	LABOR(2)	TOTAL
350 MCM Al Wire (per set) \$	1,096.60	\$0.00	\$1,096.60
500 MCM Cu Wire (per set) \$	1,717.40	\$0.00	\$1,717.40
750 MCM Al Wire (per set) \$	1,178.20	\$0.00	\$1,178.20
750 MCM Cu Wire (per set) \$	2,073.60	\$0.00	\$2,073.60
Pull Setup (one per cab)	\$0.00 \$	181.11	\$181.11
Pulling Cable (per set)	\$0.00 \$	77.90	\$77.90
Tap Wires in Transformer and Cabinet (per set)	\$0.00 \$	176.00	\$176.00
Usage Statistics			
350 MCM Al Wire	0.06%		
500 MCM Cu Wire	0.35%		
750 MCM Al Wire	87.14%		
750 MCM Cu Wire	12.44%		
Weighted Cost of Wire	\$1,291.31		
Number of Sets			
1 Set	18.42%		
2 Sets	2.63%		
3 Sets	10.53%		
4 Sets	68.42%		
Weighted Pulling Cost	\$0.00	\$437.36	
Weighted Wire Subtotal	\$4,247.76	\$578.95	
Total Cost of Secondary	\$5,264.07		

The first 12 sets of service conductors will be tapped, since they are included in a standard transformer installation (750 KVA or greater). Any sets greater than 12 will incur a differential cost per set: **\$88.00**

1 - Includes Sales Tax, 5.82 % Stores Loading of All Material, and 20.7% Engineering Overhead of all Material.

2 - Includes Payroll, Taxes, Insurance, P&W, & Transportation, and 20.7% Engineering Overhead of all Labor.

3 - 8 foot spacing between cabinet and transformer needs 20' of conductor per set.

4 - Usage statistics based on all new installations during 2018.

UNDERGROUND MATERIAL AND LABOR COST PER HANDHOLE**SINGLE PHASE PRIMARY 48" SPLICE BOX****WITH SPLICES AND PULL LABOR****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$227.55	\$678.64	\$906.19
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$227.55	\$678.64	\$906.19
Stores Handling(2)	\$13.24	\$0.00	\$13.24
SubTotal	\$240.79	\$678.64	\$919.43
Engineering(4)	\$49.84	\$140.48	\$190.32
TOTAL	\$290.63	\$819.12	\$1,109.75

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IID, single phase primary 48" splice box, for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER HANDHOLE**TWO PHASE PRIMARY 48" SPLICE BOX****WITH SPLICES AND PULL LABOR****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$294.73	\$1,064.18	\$1,358.91
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$294.73	\$1,064.18	\$1,358.91
Stores Handling(2)	\$17.15	\$0.00	\$17.15
SubTotal	\$311.88	\$1,064.18	\$1,376.06
Engineering(4)	\$64.56	\$220.29	\$284.85
TOTAL	\$376.44	\$1,284.47	\$1,660.91

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIID, two phase primary 48" splice box for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER HANDHOLE**THREE PHASE PRIMARY 48" SPLICE BOX****WITH SPLICES AND PULL LABOR****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$521.42	\$995.41	\$1,516.83
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$0.00	\$0.00
Sub-Total	\$521.42	\$995.41	\$1,516.83
Stores Handling(2)	\$30.35	\$0.00	\$30.35
SubTotal	\$551.77	\$995.41	\$1,547.18
Engineering(4)	\$114.22	\$206.05	\$320.27
TOTAL	\$665.99	\$1,201.46	\$1,867.45

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIID, three phase 48" primary splice box for design criteria and assumptions

OVERHEAD VS. UNDERGROUND
SUMMARY SHEET
COST PER FOOT -
SINGLE PHASE PRIMARY LATERAL TRENCH
WITH CABLE-IN-CONDUIT
2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$5,757.97	\$6,399.63	\$641.66
MATERIAL	\$2,673.66	\$3,011.84	\$338.18
TOTAL	\$8,431.63	\$9,411.47	\$979.84
PER FOOT TOTAL	\$8.43	\$9.41	\$0.98

OVERHEAD MATERIAL AND LABOR COST PER FOOT**SINGLE PHASE PRIMARY LATERAL POLE LINE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$508.47	\$1,452.74	\$1,961.21
Secondary	\$508.47	\$1,452.74	\$1,961.21
Poles	\$1,076.36	\$1,865.00	\$2,941.36
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$2,093.30	\$4,770.48	\$6,863.78
Stores Handling(2)	\$121.83	\$0.00	\$121.83
SubTotal	\$2,215.13	\$4,770.48	\$6,985.61
Engineering(4)	\$458.53	\$987.49	\$1,446.02
TOTAL	\$2,673.66	\$5,757.97	\$8,431.63

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIE, single phase for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER FOOTSINGLE PHASE PRIMARY LATERAL TRENCHWITH CABLE-IN-CONDUIT2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$2,358.07	\$1,235.43	\$3,593.50
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$4,066.67	\$4,066.67
Sub-Total	\$2,358.07	\$5,302.10	\$7,660.17
Stores Handling(2)	\$137.24	\$0.00	\$137.24
SubTotal	\$2,495.31	\$5,302.10	\$7,797.41
Engineering(4)	\$516.53	\$1,097.53	\$1,614.06
TOTAL	\$3,011.84	\$6,399.63	\$9,411.47
PER FOOT TOTAL	\$3.01	\$6.40	\$9.41

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, III E, single phase for design criteria and assumptions

OVERHEAD VS. UNDERGROUND
SUMMARY SHEET
COST PER FOOT -
TWO PHASE PRIMARY LATERAL TRENCH
WITH CABLE-IN-CONDUIT
2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$7,344.16	\$7,855.25	\$511.09
MATERIAL	\$3,511.55	\$6,023.69	\$2,512.14
TOTAL	\$10,855.71	\$13,878.94	\$3,023.23
PER FOOT TOTAL	\$10.86	\$13.88	\$3.02

OVERHEAD MATERIAL AND LABOR COST PER FOOT**TWO PHASE PRIMARY LATERAL POLE LINE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,115.29	\$2,813.09	\$3,928.38
Secondary	\$557.66	\$1,406.55	\$1,964.21
Poles	\$1,076.36	\$1,865.00	\$2,941.36
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$2,749.31	\$6,084.64	\$8,833.95
Stores Handling(2)	\$160.01	\$0.00	\$160.01
SubTotal	\$2,909.32	\$6,084.64	\$8,993.96
Engineering(4)	\$602.23	\$1,259.52	\$1,861.75
TOTAL	\$3,511.55	\$7,344.16	\$10,855.71

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIE, two phase for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER FOOT**TWO PHASE PRIMARY LATERAL TRENCH****WITH CABLE-IN-CONDUIT****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$4,716.15	\$2,441.41	\$7,157.56
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$4,066.67	\$4,066.67
Sub-Total	\$4,716.15	\$6,508.08	\$11,224.23
Stores Handling(2)	\$274.48	\$0.00	\$274.48
SubTotal	\$4,990.63	\$6,508.08	\$11,498.71
Engineering(4)	\$1,033.06	\$1,347.17	\$2,380.23
TOTAL	\$6,023.69	\$7,855.25	\$13,878.94
PER FOOT TOTAL	\$6.02	\$7.86	\$13.88

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIIE, two phase for design criteria and assumptions

OVERHEAD VS. UNDERGROUND
SUMMARY SHEET
COST PER FOOT -
THREE PHASE PRIMARY LATERAL TRENCH
WITH CABLE-IN-CONDUIT
2019

ITEM	OVERHEAD	UNDERGROUND	DIFFERENTIAL
LABOR	\$8,930.35	\$6,773.70	(\$2,156.65)
MATERIAL	\$4,545.66	\$8,520.39	\$3,974.73
TOTAL	\$13,476.01	\$15,294.09	\$1,818.08
PER FOOT TOTAL	\$13.48	\$15.29	\$1.81

OVERHEAD MATERIAL AND LABOR COST PER FOOT**THREE PHASE PRIMARY LATERAL POLE LINE****2019**

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$1,748.87	\$4,150.35	\$5,899.22
Secondary	\$582.97	\$1,383.45	\$1,966.42
Poles	\$1,227.11	\$1,865.00	\$3,092.11
Transformers	\$0.00	\$0.00	\$0.00
Sub-Total	\$3,558.95	\$7,398.80	\$10,957.75
Stores Handling(2)	\$207.13	\$0.00	\$207.13
SubTotal	\$3,766.08	\$7,398.80	\$11,164.88
Engineering(4)	\$779.58	\$1,531.55	\$2,311.13
TOTAL	\$4,545.66	\$8,930.35	\$13,476.01

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 2, IIE, three phase for design criteria and assumptions

UNDERGROUND MATERIAL AND LABOR COST PER FOOTTHREE PHASE PRIMARY LATERAL TRENCHWITH CABLE-IN-CONDUIT2019

ITEM	MATERIAL(1)	LABOR(3)	TOTAL
Service	\$0.00	\$0.00	\$0.00
Primary	\$6,670.90	\$1,545.34	\$8,216.24
Secondary	\$0.00	\$0.00	\$0.00
Transformers	\$0.00	\$0.00	\$0.00
Trenching	\$0.00	\$4,066.67	\$4,066.67
Sub-Total	\$6,670.90	\$5,612.01	\$12,282.91
Stores Handling(2)	\$388.25	\$0.00	\$388.25
SubTotal	\$7,059.15	\$5,612.01	\$12,671.16
Engineering(4)	\$1,461.24	\$1,161.69	\$2,622.93
TOTAL	\$8,520.39	\$6,773.70	\$15,294.09
PER FOOT TOTAL	\$8.52	\$6.77	\$15.29

1 - Includes Sales Tax.

2 - 5.82 % of All Material.

3 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

4 - 20.7% of All Material and Labor.

Note: See Appendix 3, page 3, IIF, three phase for design criteria and assumptions

2019 UCD TARIFF

AVERAGE UCD UNDERGROUND FEEDER COST

<u>Underground</u>	<u>Overhead</u>	<u>Difference</u>	
\$/Ft.....	\$/Ft.....	\$/Ft.....	
\$33.54	\$23.44		\$10.09

13 kV UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) =	\$21,634.18
13 kV Salt Spray UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) = ...	\$27,793.45
23 kV UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) =	\$26,266.35
23 kV Salt Spray UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) = ...	\$34,181.36
13 kV UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) =	\$20,802.28
13 kV Salt Spray UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) = ...	\$26,084.21
23 kV UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) =	\$26,810.33
23 kV Salt Spray UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) = ...	\$32,211.91

Based on data from Inventory Services on switch cabinet utilization (new construction only):

21	13 kV 9/3 cabinets		
1	13 kV SS 9/3 cabinets		
53	23 kV 9/3 cabinets		
6	23 kV SS 9/3 cabinets		
47	13 kV 6/6 cabinets		
8	13 kV SS 6/6 cabinets		
111	23 kV 6/6 cabinets		
17	23 kV SS 6/6 cabinets		
264		Weighted Average:	\$25,716.84
		\$/Switch Cabinet	\$25,716.84

NOTE: All estimates based on three phase requirements.
 See Exhibit LIX for details.
 Note: See Appendix 3, page 4, for design criteria and assumptions.

2019 UCD TARIFF

FEEDER COST

Feeder Length =	25,428
UG Feeder Cost* (excluding UG switches) =	\$937,867.68
26 UG Lateral Risers not required if UG Feeder is used	
Cost of each Lateral Riser =	\$3,273.30
26 Lateral Risers X \$3,273.30 =	(\$85,105.80)
Net UG Feeder Cost =	\$852,761.88
UG Feeder per foot cost =	<u>\$33.54</u>
OH Feeder Cost (excluding OH switches & hardware) =	\$596,138.34
OH Feeder per foot cost =	\$23.44
Feeder Differential Cost (per foot) =	\$10.09
13 kV UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) =	\$27,698.53
13 kV Salt Spray UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) = ...	\$34,891.17
23 kV UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) =	\$32,411.55
23 kV Salt Spray UG Switch Cabinet (9/3 cabinet w/ all hardware & cable) = ...	\$41,359.92
13 kV UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) =	\$26,866.63
13 kV Salt Spray UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) = ...	\$33,181.93
23 kV UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) =	\$32,955.53
23 kV Salt Spray UG Switch Cabinet (6/6 cabinet w/ all hardware & cable) = ...	\$39,390.47
13 kV OH Switch (including switch, pole, and all Hardware) =	\$6,064.35
13 kV OH Salt Spray Switch (including switch, pole, and all Hardware) = ...	\$7,097.72
23 kV OH Switch (including switch, pole, and all Hardware) =	\$6,145.20
23 kV OH Salt Spray Switch (including switch, pole, and all Hardware) = ...	\$7,178.56
13 kV UG Switch Cabinet - 9/3 Cabinet Differential =	<u>\$21,634.18</u>
13 kV Salt Spray UG Switch Cabinet - 9/3 Cabinet Differential =	\$27,793.45
23 kV UG Switch Cabinet - 9/3 Cabinet Differential =	\$26,266.35
23 kV Salt Spray UG Switch Cabinet - 9/3 Cabinet Differential =	\$34,181.36
13 kV UG Switch Cabinet - 6/6 Cabinet Differential =	\$20,802.28
13 kV Salt Spray UG Switch Cabinet - 6/6 Cabinet Differential =	\$26,084.21
23 kV UG Switch Cabinet - 6/6 Cabinet Differential =	\$26,810.33
23 kV Salt Spray UG Switch Cabinet - 6/6 Cabinet Differential =	\$32,211.91
Switch Cabinet Differential (Weighted Average) =	<u>\$25,716.84</u>

* These costs include cable-in-conduit and cable pull boxes.

Note: See Appendix 3, page 4, for design criteria and assumptions

2019 UCD TARIFF
SMALL COMMERCIAL SERVICES (1)

WOOD POLE, ACCESSIBLE

	120 VOLT, 2-WIRE SERVICE			120/240 VOLT, 3-WIRE SERVICE		
	OVERHEAD	UNDERGROUND	DIFFERENTIAL	OVERHEAD	UNDERGROUND	DIFFERENTIAL
MATERIAL (2)	\$22.69	\$78.30	\$55.61	\$88.62	\$168.36	\$79.74
LABOR(4)	\$144.01	\$504.60	\$360.59	\$221.45	\$520.81	\$299.36
STORES HANDLING (3)	\$1.32	\$4.56	\$3.24	\$5.16	\$9.80	\$4.64
ENGINEERING (5)	\$34.78	\$121.60	\$86.82	\$65.25	\$144.69	\$79.44
TOTAL	\$202.80	\$709.06	\$506.26	\$380.48	\$843.66	\$463.18

WOOD POLE, INACCESSIBLE

	120 VOLT, 2-WIRE SERVICE			120/240 VOLT, 3-WIRE SERVICE		
	OVERHEAD	UNDERGROUND	DIFFERENTIAL	OVERHEAD	UNDERGROUND	DIFFERENTIAL
MATERIAL (2)	\$22.69	\$78.30	\$55.61	\$88.62	\$168.36	\$79.74
LABOR(4)	\$169.94	\$595.44	\$425.50	\$261.29	\$614.55	\$353.26
STORES HANDLING (3)	\$1.32	\$4.56	\$3.24	\$5.16	\$9.80	\$4.64
ENGINEERING (5)	\$40.15	\$140.41	\$100.26	\$73.50	\$164.09	\$90.59
TOTAL	\$234.10	\$818.71	\$584.61	\$428.57	\$956.80	\$528.23

CONCRETE POLE, ACCESSIBLE

	120 VOLT, 2-WIRE SERVICE			120/240 VOLT, 3-WIRE SERVICE		
	OVERHEAD	UNDERGROUND	DIFFERENTIAL	OVERHEAD	UNDERGROUND	DIFFERENTIAL
MATERIAL (2)	\$22.69	\$82.93	\$60.24	\$88.62	\$172.99	\$84.37
LABOR(4)	\$144.01	\$552.29	\$408.28	\$221.45	\$568.50	\$347.05
STORES HANDLING (3)	\$1.32	\$4.83	\$3.51	\$5.16	\$10.07	\$4.91
ENGINEERING (5)	\$34.78	\$132.49	\$97.71	\$65.25	\$155.57	\$90.32
TOTAL	\$202.80	\$772.54	\$569.74	\$380.48	\$907.13	\$526.65

1 - Conditions for FPL providing the UG service wire to a non-residential customer's meter can include:

- A) Customer's Main Line Switch is to be less than or equal to 125 amps (120/240 Volt 3-wire service) or 60 amps (120 Volt 2-wire service) AND
- B) The meter can is at least 5 feet, but not more than 100 feet, from the pole.

2 - Includes Sales Tax.

3 - 5.82 % of All Material.

4 - Includes Payroll, Taxes, Insurance, P&W, & Transportation.

5 - 20.7% of All Material and Labor.

* These costs include cable-in-conduit and cable pull boxes.

Note: See Appendix 3, page 4, for design criteria and assumptions

2019 UCD TARIFF

CREDITS

Lateral Trench Credit =	\$140.23 /MH X 0.029	MH =.....	\$4.07 /Ft.
Secondary/Service Trench Credit =	\$140.23 /MH X 0.023	MH =.....	\$3.23 /Ft.
2" Conduit Installation Credit =	\$140.23 /MH X 0.005	MH =.....	\$0.70 /Ft.
Larger than 2" Conduit Installation Credit =	\$140.23 /MH X 0.007	MH =.....	\$0.98 /Ft.
Large (48") Handhole/ Primary Splice Box Installation Credit =	\$140.23 /MH X 1.94	MH =.....	\$272.05 /HH
Small (30" or smaller) Handhole Installation Credit =	\$140.23 /MH X 0.51	MH =.....	\$71.52 /HH
Concrete Pad for Pad Mounted Transformer Credit =	\$140.23 /MH X 0.5	MH =.....	\$70.12 /Pad
Feeder Splice Box Installation Credit =	\$140.23 /MH X 5.54	MH =.....	\$776.87 /Box
Padmount Switch Chamber Installation Credit =	\$140.23 /MH X 4.71	MH =.....	\$660.48 /Chamber

EXHIBIT LXXXII